Teachers' Perceptions of Reading Assessment for Students with Emotional and/or Behavioural Disorders

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ABSTRACT

The purpose of this study was to investigate teachers' levels of training, perceptions of competence, and past and present practices regarding reading assessment for student with emotional and/or behavioural disorders (EBD). For the purpose of the study, EBD was defined as, "a disability characterized by behavioural or emotional responses in school programs so different from appropriate age, cultural, or ethnic norms that they adversely affect educational performance, including academic, social, vocational or personal skills" (Forness & Knitzer, 1992, p. 13). An adapted version of the survey entitled, *A National Survey of the Training and Practice of School Psychologists in Reading Assessment and Intervention* (Machek & Nelson, 2007) was distributed to approximately 200 teachers employed by a large urban school division in Western Canada. One hundred and seventy-five educators responded to a 24-question survey designed to explore teachers' perceptions of reading instruction, intervention, and assessment for typically achieving students and students with EBD.

Descriptive analyses and analyses of variance (ANOVA's) were used to examine the mean responses of teachers' levels or training, perceptions of competence, and past and present reading assessment practices. Teachers with varied levels of teaching experience and specialized training were found to have received little training (university and professional development) in the area of reading instruction and reading assessment for students with EBD. Furthermore, educators believed they have a low level of expertise and confidence in the area of reading assessment and instruction, and believed they would benefit from additional training.

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DEDICATIONS

This thesis is dedicated to my parents.
For bestowing guidance, wisdom, and encouragement.
For demonstrating untiring faith, utmost support, and steadfast love.
For providing me with endless opportunity.

Thank-you always ☺

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

Chapter 1: Introduction

Reading is one of the most important areas in education. Reading proficiency serves as a prerequisite for other academic domains (e.g., social studies, and science), as well as overall success in daily activities and future employment (Vaughn, Bos, & Schumm, 2007). A wealth of literature suggests that students who are challenged emotionally and behaviourally often struggle academically, especially in the area of reading (e.g., Anderson, Kutash, & Duchnowski, 2001; Coleman & Bos, 2002; Vaughn, Levy, Coleman, & Bos, 2002; Wehby, Falk, Barton-Atwood, Lane, & Cooley, 2003). Yet, research regarding reading interventions for students with emotional and behavioural disorders (EBD) remains limited (Rivera, Otaiba, Koorland, 2006; Levy & Vaughn, 2002). A majority of empirical research regarding students with EBD has focused on behaviour management techniques and social skills interventions, rather than addressing academic needs such as reading (Bos & Vaughn, 2002; Montague, Enders, & Castro, 2005; Sutherland & Wehby, 2001; Wehby, Falk, Barton-Arwood, Lane, & Cooley, 2003). Therefore, effective reading instruction can be a challenging task for educational professionals, as negative behaviour often becomes the focus or the primary concern with the student, rather than reading skill development (Knitzer, Steinberg, & Fleish, 1990).

In order to provide effective reading instruction, assessment is an essential first step (Vaughn et al., 2007). "When we assess students, we are able to determine what they know and need to know. This information allows us to design instruction that is targeted to the needs of the student" (Vaughn et al., 2007, p. 336). One challenge that teachers face is selecting a meaningful and appropriate assessment tool (Campbell, 2001). The more common types of reading assessment administered by educational professionals in

schools include formal reading assessments (standardized tests) and informal reading assessments (observations; Alvermann & Phelps, 2005). There have been extensive debates regarding which assessment tools are the most effective measure of reading achievement (e.g., Allington, 2003; Campbell, 2001; Ervin, 1998; Goodman, 1972; Janesick, 2001; Johnston & Costello, 2005; Valencia & Buly, 2004). The majority of this research pertains to typically achieving students. There is an alarming gap in the literature regarding what is considered the most effective method to appropriately assess the reading skills of students with EBD.

Several studies have investigated teachers' perceptions and knowledge regarding literacy and reading instruction (e.g., Bos et al., 2002; Mather et al., 2001; Moats & Foorman, 2003). Evidence supports the idea that classroom teachers lack sufficient training and knowledge to effectively meet the needs of students with EBD within their classrooms (Bos et al., 2001; Campbell, 2001; Mock, & Kauffman, 2002; Nelson, 2000). In addition, researchers have identified that classroom teachers lack training and knowledge in delivering effective reading instruction to students with EBD (e.g., Bos et al., 2001; Levy & Vaughn, 2002; Mather et al., 2001; Moats & Foorman, 2003). If classroom teachers lack appropriate training in behaviour interventions and reading interventions for students with EBD, it seems safe to assert that classroom teachers may also be ill prepared to *assess* the reading skills of students with emotional and behavioural disorders. This leads one to ask, are classroom teachers prepared, and properly trained to carry out this challenging task?

1.1 Statement of Purpose

Students with emotional and behavioural disorders are prevalent in today's classrooms. Canada's National Longitudinal Survey of Children and Youth (NLSCY) estimated 19.1 percent of children in Canada are vulnerable due to behavioural problems (Willms, 2002). Classroom teachers must first assess students' reading skills in order to plan for appropriate instruction to address individual reading needs (Torgesen, 2007). There is extensive data regarding reading assessment for general populations (e.g., Cobb, 2003; Johnston, 2003; Kame'enui, et al., 2006; Parker et al., 1995). However, there have been minimal investigations regarding reading assessment solely for students with emotional and behavioural disorders (EBD). There is evidence suggesting that educators lack knowledge and training in the area of reading instruction (e.g., Bos et al., 2001; Levy & Vaughn, 2002; Mather et al., 2001; Moats & Foorman, 2003), and in the area of reading assessment (Nelson & Machek, 2007). However, extensive database searches found no published studies investigating teachers' perceptions of reading assessment for students with emotional and behavioural disorders (EBD). Teachers' perceptions of knowledge and competence have a profound effect on student outcomes (Bos et al., 2001). There is much evidence regarding the dismal outcomes for students with EBD (e.g., Anderson et al., 2001; Landrum et al., 2003; Wehby et al., 2003), yet very little information is available on how to meet the needs of this diverse group of readers. Therefore, this study examined: what are teachers' levels of training, perceptions of competence, and past and present practices regarding reading assessment for students with emotional and/or behavioural disorders (EBD).

Specifically, this study explored the following research questions:

1. What are teachers' levels of training regarding reading assessment for students with emotional and behavioural disorders (EBD)?
2. What are teachers' perceptions of competence regarding reading assessment for students with emotional and behavioural disorders (EBD)?
3. What are teachers' past and present practices (e.g., formal and/or informal reading tests) regarding reading assessment for students with emotional and behavioural disorders (EBD)?

1.2 Definitions

1.2.1 Emotional and Behavioural Disorders (EBD)

The various definitions of emotional disorder and behaviour disorder (EBD) have drawn some attention over the years, and many terms have been examined and used interchangeably (Rosenberg, Wilson, Maheady, & Sindelar, 2001). Often, their meaning is dependent on the user's background or beliefs. Someone who believes that negative behaviour constitutes the problem is likely to use the term behaviour disorder (Rosenberg, et al., 2004). Whereas, someone who believes the negative behaviour stems from emotional conflict may use the term emotional disorder (Rosenberg, et al., 2004). For the purpose of this study, EBD will be defined as, "a disability characterized by behavioural or emotional responses in school programs so different from appropriate age, cultural, or ethnic norms that they adversely affect educational performance, including academic, social, vocational or personal skills" (Forness & Knitzer, 1992, p. 13). Individuals with emotional and/or behavioural disorders may be described according to two primary dimensions: externalizing; and internalizing behaviours (Kauffman, 2001). These internalizing and externalizing behaviours inhibit a child's ability to establish and

maintain positive social relationships with peers, adults, and teachers (Reid, Gonzalez, Nordness, Trout, & Epstein, 2004).

1.2.1.1 Externalizing Behaviours. Children who have externalizing disorders often display aggressive (e.g., bullying, fighting, and using a weapon; McMahon & Kotler, 2005) and delinquent behaviours (e.g., fire setting, breaking and entering, and other destruction of property) (McMahon & Kotler, 2005). They are in frequent conflict with authority, within the school or in community settings (Coleman & Webber, 2002). Externalizing behaviours are difficult to overlook since students displaying these overt behaviours appear impulsive and have little to no self-control (Jensen, 2005). "These disorders tend to be extroversive or interpersonal in their manifestations; in the past, they have been called *under controlled* and *acting out*" (Coleman & Webber, 2002, p. 203). Examples of externalizing behaviours include aggression, hostility, behaviours associated with hyperactivity (e.g., ADHD), and conduct disorder (CD; Coleman & Webber, 2002; Jensen, 2005).

1.2.1.2 Internalizing Behaviours. Students with internalizing behaviours exhibit the opposite of overt acting out behaviours displayed in externalizing behaviours (Jensen, 2005). That is, these individuals are much more withdrawn (Kauffman, 2001). "Students who have internalizing behavioural patterns are typically more shy, quiet, dependent, helpless, anxious, depressed, possibly suicidal, and frequently victimized" (Jensen, 2005, p. 7). Depression and anxiety disorders are the most prevalent of internalizing behaviour disorders (Coleman & Webber, 2002).

1.2.2 Reading

Reading is a language skill required for individuals to be fully functional and independent (Nelson, Benner, & Gonzalez, 2005; Torgesen, 2002). The National Reading Panel defined reading as,

> a complex system of deriving meaning from print that requires all of the following: (1) the skills and knowledge to understand how phonemes, or speech sounds, are connected to print, (2) the ability to decode unfamiliar words, (3) the ability to read fluently, (4) sufficient background information and vocabulary to foster reading comprehension, (5) the development of appropriate active strategies to construct meaning from print, (6) the development and maintenance of a motivation to read (National Reading Panel, 2000).

1.2.3 Assessment

Assessment, one of the most important components of the educational process, will be defined as:

> The gathering of relevant information to help an individual make decisions. The educational and psychological assessment of exceptional students, specifically, involves the collection of information that is relevant in making decisions regarding appropriate goals and objectives, teaching strategies, and program placement. (Taylor, 2006, p. 3)

1.2.3.1 Reading Assessment. Smith (2004) stated that reading is one of the most frequently measured abilities. Classroom teachers depend on assessment tools to determine the reading abilities of their students, and use the information to guide instruction (e.g., Cobb, 2003; Johnston, 2003). Reading assessment measures may

include formal and informal assessment tools.

1.2.3.2 Formal Assessment. Formal tests are defined as, "instruments composed of empirically selected items; have definite instructions for use, data or reliability, and validity; and are norm or criterion-referenced" (Harp & Brewer, 1996, p. 535). Norm-referenced tests and criterion-referenced tests are two types of formal tests (Richek, Caldwell, Jennings, & Lerner, 2002). Norm-referenced tests also referred to as standardized tests, compare a student's performance to a large sample of students who are representative of the general population (Richek et al., 2002). Criterion-referenced tests compare a student's performance to a specific standard rather than a general sample (Richek et al., 2002). "This test determines whether a student has mastered certain competencies or skills" (Richek et al., 2002, p. 373). Some examples of formal reading tests include: the Woodcock Reading Mastery Tests – Revised (WRMT-R; Woodcock, 1998); the Gray Oral Reading Test - Fourth Edition (GORT-4; Weiderhold & Bryant, 2001); and the Test of Reading Comprehension – Third Edition (TORC-3; Brown, Hammil, & Weiderholt, 1996).

1.2.3.3 Informal Assessment. Informal assessments focus on the reading behaviours exhibited by individuals and teacher observation rather than scores and comparisons (Wason-Ellam, 1994). This form of assessment is often referred to as authentic assessment (Boyd-Batstone, 2005). The term *observation* is key when discussing informal assessment (Boyd-Batstone, 2005). "Observation can be very powerful in developing a complete picture of a child's literacy development" (Cockrum & Castillo, 1994, p. 97). Goodman (1978) used the term *kid watchers* to define informal observations, where classroom teachers were encouraged to become thoughtful and

reflective observers of students' literacy behaviours (Goodman, 1978). Checklists, interviews, anecdotal record keeping, conferences, portfolios, metacognitive interviews, reading miscues, oral reading, and cloze procedure are all examples of informal assessments (Wason-Ellam, 1994).

1.3 Significance of the Study

Despite the proliferation of research regarding the axiomatic link between reading failure and students with EBD (e.g., Anderson, Kutash, & Duchnowski, 2001; Coleman & Bos, 2002; Vaughn et al., 2002; Wehby et al., 2003), there is an alarming gap in the literature surrounding how classroom teachers are assessing the reading skills for this population of individuals. This study investigated teachers' perceptions of training, competence, and practice regarding reading assessment for students with EBD. The lack of literature available in regards to this topic suggests the need for further research in this area. Potential benefits of such a study include raising educators' awareness of the importance of meeting the literacy needs of students with EBD and assisting educators in exploring how they can more effectively instruct and assess this diverse group of readers.

1.4 Chapter Organization

A review of the literature regarding academic underachievement, reading assessment, and teachers' perceptions relating to reading assessment and students with EBD follows in Chapter 2. A description of the research methods and procedures employed are presented in Chapter 3, while an analysis of the data will be presented in Chapter 4. The final chapter, Chapter 5, summarizes the conclusions of the study, implications for practice, and directions for further research.

Chapter 2: Literature Review

This review of literature related to reading assessment and students with EBD is organized into two major sections. The first section critically reviews academic achievement, reading achievement, and examines multiple facets of, and competing perspectives concerning, reading assessment for students with EBD. The second section examines teachers' levels of training, and perceptions of competence and practices regarding reading instruction and assessment for students with EBD.

2.1 Academic Achievement and Students with EBD

Academic failure is a well-documented characteristic of children with emotional and behavioural disorders (EBD) (Wehby, Falk, Barton-Arwood, Lane, & Cooley, 2003). The academic achievement of students with emotional and behavioural disorders is significantly lower in comparison to their typically achieving peers (e.g., Anderson, Kutash, & Duchanowski, 2001; Landrum, Tankersley, & Kauffman, 2003; Lane, Gresham, & O'Shaughnessy, 2002; Levy & Chard, 2001; Reid, Gonzalez, Nordness, Trout, & Epstein, 2004; Trout, Nordness, Pierce, & Epstein, 2003; Wehby, Falk, Barton-Arwood, Lane, & Cooley, 2003). This population of students likely experience less overall school success than any other subgroup of students with or without disabilities (Landrum, et al., 2003). Below average achievement, higher incidence of grade retention, lack of motivation, absenteeism rates, movement in and out of schools, and adjustment issues are just a few areas that present challenges for students with EBD (Anderson, Kutash, & Duchnowski, 2001; Balajhy & Lipa-Wade, 2003).

A meta-analysis conducted by Reid, et al., (2004) examined the academic performance of students with EBD. This quantitative research review compared the academic performance of students with EBD to age equivalent, typically achieving peers

to determine if differences in academic status existed. This review included a literature search of relevant studies from 1961 to 2000. The search yielded a total of 205 potential articles that fit their inclusion criteria which included: (a) only peer-reviewed journals published between 1961-2000; (b) participants were identified by one of the four methods outlined in the study; (c) study must have included a mean score and standard deviation derived from a standardized test of one academic area; and (d) samples between 5 to 21 years of age were considered. Upon further analysis and additional screenings, 25 studies (including 2486 participants with EBD) were included in the review. The results indicated a weighted mean effect size of (-.69) suggesting a significant difference in the academic performance of students with EBD compared to their typically achieving peers across all academic subject areas. "In this case, 75% of students in the EBD group scored below the mean of the contrast group. The overall mean achievement level of the EBD group is at the 25th percentile" (Reid et al., 2004, p. 138). In 89% of *all* comparisons in this study, students with EBD achieved lower scores in academics than any other group. In this study, students with EBD demonstrated significant academic deficits.

Researchers have begun investigating particular types of emotional and behavioural problems (e.g., ADHD, conduct disorder) in relation to academic achievement (Nelson, Benner, Lane, & Smith, 2004). In a cross-sectional study, Nelson et al., (2004) investigated the extent to which students with EBD experienced academic deficits in various content areas (e.g., reading, math, and written language), taking gender and age into consideration. In addition, the authors examined how externalizing and internalizing behaviour problems related to academic underachievement. One hundred and twenty-six males and 29 females ranging from Kindergarten to Grade 12 receiving special education

services for emotional and/or behavioural disorders participated in this study. However, there was no mention throughout the article what these *special education services* entailed. The Child Behaviour Checklist: Teacher Report Form (TRF) (Achenbach, 1991) measured the severity of internalizing and externalizing behaviours on a 3-point Likert scale that ranged from 0 (no problem) to 3 (severe problem). The Woodcock-Johnson, Third Edition Test of Achievement (WJ-III) (Woodcock, McGraw, & Mather, 2001) was used to assess academic achievement in the Broad Reading, Broad Math, Math Calculation Skills, Broad Written Language, and Written Expression clusters. Intelligent quotient (IQ) scores were measured by the Wechsler Intelligence Scale for Children, Third Edition (WISC-III) (Wechsler, 1991). Independent t-tests determined if statistically significant differences existed between mean scores of academic achievement in relation to age and gender. Results of their study demonstrated an effect size discrepancy of .94 for each academic cluster, indicating that 83% of EBD participants scored below the norm group mean across all academic content areas. Statistical differences were found amongst adolescent children in the math cluster, suggesting that adolescents were more likely to experience math deficits. However, this was not evident in the reading and writing cluster. Multiple regression analyses revealed that students with EBD that exhibited more externalizing behaviours (e.g., aggression, and attention problems) were more likely to experience academic deficits than students exhibiting internalizing behaviours (e.g., somatic complaints, and feelings of anxiety and/or depression). There was no evidence of gender differences in relation to academic achievement. However, other researchers have suggested males generally experience more externalizing behaviours and females more internalizing behaviours (Hall & Hall, 2003; Nicholson,

2005; O'Mahony, 2005).

Although there is an apparent link between low academic achievement and behaviour problems, there is little evidence available regarding which one of the two came first; the academic problem or the behaviour problem (Frick, Kamphaus, Lahey, Christ, Hart, & Tannenbaum, 1991). Whether or not the externalizing behaviour causes the academic deficits or the academic deficits cause the behaviour problems, both engage in a reciprocal relationship that have a definite impact on students' future outcomes (Trout et al., 2003). The area of reading is one that presents difficulty for students with EBD.

2.1.2 Reading Achievement and Students with EBD

Students with EBD experience frequent deficiencies in academic functioning in the area of reading than in any other academic area (e.g., Rivera et al., 2006; Vaughn et al., 2002; Wehby et al., 2003). This is particularly alarming, since reading is considered the most important area of education (Vaughn, Bos, & Schumm, 2007). "More than any other area, school success is dependent on knowing how to read and understand what is read" (Vaughn, Levy, Coleman, & Bos, 2002, p. 2). Students with EBD demonstrate significant reading deficits in comparison to their typically achieving peers (e.g., Mastropieri, Jenkins, & Scruggs, 1985; Rivera, Al-Otaiba, & Koorland, 2006; Vaughn, Levy, Coleman, & Bos, 2002; Wehby et al., 2003). Even when the relationship between reading achievement is compared to students with other exceptionalities (e.g., learning disabilities), evidence suggests that students with EBD experience the least academic success (e.g., Anderson et al., 2001).

Anderson et al. (2001) compared the academic progress of students with EBD to students diagnosed with a learning disability (LD). The study also explored the correlation between academic achievements and several school-related variables such as,

attendance, school mobility, amount of discipline referrals, and retention rates, and how each contributed to academic achievement of these two groups over a period of five years. Forty-two students with EBD and 61 students with LD (n = 103) participated in this study. Participants were given the following standardized math and reading tests in kindergarten or first grade and then again in fifth or sixth grade: the Kaufman Test of Educational Achievement (KTEA; Kaufman & Kaufman, 1985); the Peabody Individual Achievement Test-Revised (PIAT; Dun & Markwardt, 1988); and the Woodcock Johnson Test of Achievement-Revised (WJA-R; Woodcock & Johnson, 1989/1990) at two different points in time: kindergarten or first grade, and again in fifth or sixth grade. Repeated measures analyses on academic achievement were conducted to investigate changes in progress over time for math and reading. In the first testing period, students with EBD showed a higher average in reading than students with LD. However, students with LD demonstrated significant growth in their reading scores over the five-year span ($t(60) = 4.73$, $p > .001$), whereas students with EBD did not ($t(41) = .09$, $p > .025$). Anderson et al., 2001 acknowledged similar studies (e.g., Epstein & Cullinan, 1983; Gajar, 1980) that examined the relationship of academic achievement for students with LD and EBD, however arrived at different conclusions (i.e., Epstein & Cullinan reported that students with EBD were functioning at a higher level than students with LD, based on 3 standardized tests). This suggests the need for further research in this area (Anderson et al., 2001). Coleman and Vaughn (2000) reiterated this idea, stating little research is available regarding interventions for this population of students. In order for classroom teachers to provide effective reading interventions and instruction, some form of assessment must first occur to make informed decisions.

2.2 Assessment

Assessment is a vital area of education that enables educators, as well as other professionals, to make informed educational decisions (Taylor, 2006). Assessment can be defined as, "a systematic process of gathering information about students" (Mariotti & Homan, 2005, p. 1). Teachers assess students for different purposes, including: "(1) initial identification or screening, (2) determination and evaluation of teaching programs and strategies, (3) determination of current performance level and educational need, (4) decisions about eligibility, (5) development of individualized education programs, and (6) decisions about program placement" (Taylor, 2006, p. 29). There is a strong argument that assessment and instruction go hand in hand, since instruction and assessment are reciprocal of each other and assessment guides instruction (Cobb, 2003; Shellard, 2003; Smith, 2004; Tompkins & Hoskisson, 1995; Wason-Ellam, 1994).

Assessment is critical for effective teaching and learning. It must look different, involve a variety of assessment tools, occur in different settings, and be dependent upon the diversity of the students being served. "Assessments cannot be carried out in a uniform way across all populations, without consideration for students' own experiences, ways of learning and communication, and the goal and values of the communities from which the students come" (Farr & Trumbull, 1997, p. 2).

There are many areas in education to assess; however, reading is one of the most frequently measured abilities (Smith, 2004). Although McLoughlin and Lewis (2005) defined assessment as, "the systematic process of gathering educationally relevant information…" (p. 3), reading assessment is more than just gathering information (Campbell, 2001). When teachers assess the reading skills of their students they are recognizing and understanding patterns in reading behaviours. These patterns assist

classroom teachers in making informed decisions regarding instruction (Campbell, 2001).

2.2.1 Reading Assessment

The purpose of reading assessments is slowly changing (Shellard, 2003). Once, the goal of reading was to determine how well students in a particular grade compared to their peers in their overall reading proficiency. However, more recently reading assessments have changed to focus on very specific literacy skills (Shellard, 2003). Five important areas in which teachers should assess for reading skills include phonemic awareness, phonics, fluency, vocabulary, and comprehension (e.g., Armbruster, Lehr, & Osborn, 2001; Gregory & Nikas, 2005, Torgesen, 2002). Assessment within these areas allow teachers to gain further understanding of reading patterns in each area, which contributes to improving instruction to meet students' specific and individual needs (Shellard, 2003).

The axiomatic link between reading assessment and instruction is reiterated throughout the literature (e.g., Cobb, 2003; Johnston, 2003; Shellard, 2003). Assessing student performance is crucial for developing effective instructional policy and designing programs tailored to individual students' needs (Kame'enui et al., 2006). Assessment that drives instruction is key to ensuring a successful literacy plan (Harp & Brewer, 1996). There is much focus placed on delivering effective reading instruction. However, the assessment process is equally important and deserving of attention. Classroom teachers must assess students' reading to seek out information that will guide them to plan and personalize instruction (Harp & Brewer, 1996). In addition, reading assessment data can assist classroom teachers in deriving student groupings, determining which students could benefit from further instruction, and what student's could be challenged in a particular literacy skill (Shellard, 2003).

A *one size fits all* model should not be adopted for instruction, as different children require different teaching methods and strategies (Valencia & Buly, 2004). Therefore, assessment should be individualized as well (Farr & Trumbell, 1997). It is important classroom teachers select assessment measures to appropriately assess the different reading skill areas (Campbell, 2001). Tools used by educational professionals to measure reading ability consist mainly of formal assessments and informal assessments. There are advantages and disadvantages of using both types of tools.

2.2.1.1 Formal Reading Assessments. Since the implementation of the No Child Left Behind legislation (2002), assessment seems to be associated with accountability and school-wide reformations. In the United States, recent mandates have required standardized tests be implemented in an attempt to improve national academic standings. Students have been submitted to annual high-stakes testing in order to meet federal accountability requirements (Allington, 2003). "Achievement testing in the United States has increased dramatically in frequency and importance during the past 25 years and is now a cornerstone of educational practice and policy making" (Paris & Hoffman, 2004, p. 199). Numerous benefits to using formal reading assessments have been identified (e.g., Bos & Vaughn, 2002; Harp & Brewer, 1996; Valencia, 1997). For example, formal assessments create reliable and consistent scores (Valencia, 1997). These tests are, "extremely efficient and economical to administer and score and easy to standardize and norm" (Valencia, 1997, p. 15). Formal assessments are also useful because they can identify *which* students are failing to meet the appropriate reading standards, how well students demonstrate skills, and where their deficits are (Jandris, 2001). Formal reading assessments are being used to improve instruction at the school, classroom, and student

levels (Henning, 2006; Jandris, 2001). Formal tests are an effective means to measure reading behaviours (Winograd et al., 2003) and are a useful tool in determining students who are good readers as well as those students deemed at risk (Leaker, 1991). In addition, parents value formal tests because they provide evidence of comparisons in specific areas of reading such as, word recognition and comprehension relative to their peers (Henning, 2006; Shellard, 2003).

A number of disadvantages have also been identified relating to the use of formal reading tests. Many researchers believe formal reading assessments: are not an effective tool to measure reading skills; are not a true measure of a child's reading abilities; and do not aid in improving instruction (e.g., Ervin, 1998; Hammill, 1987; Harp & Brewer, 1996; Taylor, 1999; Valencia, 1997; Wason-Ellam, 1994). Rather, formal reading tests are implemented for reasons such as, accountability, power, ranking children, and evaluating teachers (Allington, 2003; Smith, 2004; Valencia & Buly, 2004). Not only are researchers questioning the validity of scores for students, but also these scores are often seen as indicators of teachers' instructional abilities (Wason-Ellam, 1994). For example, Wason-Ellam (1994) believed the focus of these formal tests are directed at proving teachers' abilities and worth, rather than helping children.

Some researchers believe formal tests measure isolated sub-skills and are not a true measure of a child's reading ability (e.g., Hammill, 1987; Harp & Brewer, 1996; Taylor, 1999; Valencia, 1997; Wason-Ellam, 1994). In assessing word recognition, students are reading isolated words out of context and, therefore, rely on graphic and phonemic cues (Hammill, 1987). "Proficiency in isolated skills tells us little about a students' ability to read" (Hammill, 1987, p. 94). Formal assessments are not synonymous with the reading

behaviours a child exhibits when reading words within the context of a story (Goodman, 1976; Taylor, 1999). Although Taylor's (1999) study looked at phonemic awareness and reading, she made some interesting conclusions regarding the Woodcock Johnson Revised, a well-known formal assessment tool. Taylor (1999) claimed that the deficits and deficiencies identified by the isolated sub-skill tests found in the Woodcock Johnson are not synonymous with a child's daily reading and writing skills in the structured classroom. "On tests like the Woodcock-Johnson, kids scored really low, but, for example in their everyday reading and writing, they did have the ability to encode and decode" (Taylor, 1999, p. 224).

A vast percentage of researchers agree that implementing a variety of assessment tools, including informal assessment tools, provide a more reliable and accurate profile of a child's reading behaviours (e.g., Johnston, 2003; Valencia, 1997; Wason-Ellam, 1994). It is important that informal assessments are also considered when reporting and discussing children's' reading behaviours.

2.2.1.2 Informal Assessment. Through informal assessment, the classroom teacher plays an active role in observing, recording, and interpreting data that occurs in the structured classroom setting (Boyd-Batstone, 2005). The most common noted advantages of informal reading assessments is that they guide instruction (Bos & Vaughn, 2002; Johnston, 2003; Shellard, 2003; Valencia, 1997), and occur within a natural setting and natural context of reading (Hammill, 1997; Hammond, 1992; Simmons, 2000; Valencia, 1997; Wason-Ellam, 1994; Wiederholt & Bryant, 1987).

Informal assessments measure multiple domains of student learning, that is useful in planning and guiding instruction (Valencia, 1997). The data gathered from informal

assessments provide teachers with immediate information to make adjustments in instruction as well as identify strengths and weaknesses of the student (Shellard, 2003). Recording and noting children's literature behaviours is critical in aiding classroom instruction (Johnston, 2003). "This means noticing the strategies children use to figure out a word, and their appeals for verification…or recognizing what a child's *kycke* (cake) indicates about his/her phonemic structure" (Johnston, 2003, p. 91). Analyzing and making sense of a child's literate behaviour, and noticing what children *can* do, will be a much more effective guide and therefore improve instruction.

In informal assessments, children are exposed to a wealth of literature and engaged in real reading in a natural setting (e.g., Hamill, 1997; Simmons, 2000; Valencia, 1997; Wason-Ellam, 1994). Thus, "allowing teachers to assess literacy through authentic classroom activity" (Wason-Ellam, 1994, p. 63). To gain better insight on a child's overall reading behaviours, reading assessment should occur in a natural reading environment, where the child is reading words within the context of a story (Goodman, 1978). Informal assessments allow teachers to witness firsthand the products of a child's performance in unconstrained, everyday situations (Hammill, 1997). Experienced teachers who are familiar with the elements of reading can easily identify students with reading difficulties and/or reading levels quite efficiently with informal testing (Wiederholt & Bryant, 1987)

Simmons (2000) argued that assessment with books and analysis of real-reading behaviours reveals what standardized testing of sub-skills do not. Teachers are better informed about students' reading and writing abilities when they are observed engaged in real, meaningful tasks, rather than by administrating isolated tests (Simmons, 2000).

Noting meaningful construction in a child's reading is more valuable than scoring errors (Hammond, 1992; Smith, 2004; Wason-Ellam, 1994). Rather than focusing on the number of errors a child has made while reading, informal assessment such as, miscue analyses, focuses on how children are reading, self-correcting, and most importantly making meaning (Hammond, 1992).

A number of disadvantages to using informal assessments have also been identified. The most noted disadvantages of informal reading tests are that they are time-consuming (Hallahan & Kauffman, 2003), lack power (Far & Trumbull, 1997), and are often difficult to interpret (Paris & Hoffman, 2004). Informal reading tests such as, miscue analysis, can be impractical for classroom teachers. These types of assessments require extra time to prepare, administer, and note observations (Paris & Carpenter, 2004). Although informal assessments can be a rich source of information they can be very time consuming for teachers (Hallahan & Kauffman, 2003).

Another disadvantage is that the interpretation of results of informal assessments may differ and be inconsistent from teacher to teacher (Paris & Carpenter, 2005). For instance, in running records, one teacher may count a repetition as an error, while another teacher may not because the meaning of the text was not compromised (Lipson & Wixson, 1997). Adequate training is an important factor in using informal reading inventories (Paris & Carpenter, 2005). It is important that a knowledgeable and well-trained teacher administers and analyzes these tests (Brembridge, 1992). Many informal tests may not be useful or powerful unless those who are implementing them have a proper understanding of the fundamentals of literacy (Farr & Trumbell, 1997). These studies related to formal and informal reading assessment reflect the research based on

typically achieving students. Little is known about the reading assessment practices for students with EBD.

2.3 Reading Assessment Practices for Students with EBD

Effective reading intervention is a key component for students with EBD to experience success (Vaughn, Bos, & Schumm, 2007). High quality, evidence-based instruction, particularly in reading, that is based on curriculum-based measurement is crucial for all children with learning problems (Bos & Vaughn, 2002). Recent reading initiatives derived by various school districts, divisions, and policy-makers reinforce that educators must be delivering sound reading instruction aligned with research-based practices to struggling readers (Levy & Vaughn, 2002). "Thus, accurate assessment of the academic skills of students may facilitate provision of effective services for students with behavioural disorders by helping teachers select appropriate instructional materials" (Shriner & Wehby, 2004, p. 182). This leads one to ask, how can classroom teachers implement the most effective measures of reading assessment to students with EBD?

There is limited research available on reading assessment and students with EBD. However, the few studies that have been completed suggest that formal reading assessment on its own is not an ideal form of measurement for students with emotional and behavioural difficulties (Buly & Valencia, 2002; Coleman & Vaughn, 2000; Valencia & Buly, 2004). If a teacher chooses to implement formal reading assessments, appropriate accommodations need to be provided (e.g., items on test are read to student, allowing more time, allowing breaks; Taylor, 2006; Thurlow, House, Scott, & Ysseldyke, 2000). "The majority of students with disabilities, perhaps 50 percent to 70 percent, produce higher test scores when given accommodations compared to their scores without accommodations" (Taylor, 2006, p. 66). Students with behaviour disorders experience a

greater level of anxiety during tests than their peers without behaviour disorders (Swanson & Howell, 1996). Fear of failure has been ingrained in the minds of these students, and often they will refuse to participate in formal tests unless they are certain they will succeed (Coleman & Vaughn, 2000). It is important to include specific testing accommodations in the child's Individualized Educational Plan/Program (IEP), including both classroom assessments and large-scale assessments (Thurlow, House, Scott, & Ysseldyke, 2000).

Data from one focus group study found that monitoring student progress more informally, in addition to students charting their own progress, was a more effective and preferred means of reading assessment for students with challenging behaviours (Coleman & Vaughn, 2000). Students with EBD develop a sense of self-efficacy by charting their own reading progress (Weaster, 2004).

Buly and Valencia (2002) suggested that high stakes tests are insensitive to the growth of students who are significantly below grade level. Professionals should be encouraged to look beyond failing scores to determine patterns of student performance, which can ultimately improve instruction, and thereby improve student learning (Buly & Valencia, 2004). Teachers must move beyond district tests scores and use additional diagnostic assessments to identify students' needs (Buly & Valencia, 2002).

> .... Informal reading inventories, oral reading records, and other individually tailored assessments provide useful information about all students. At the same time, we realize that many teachers do not have the time to do complete diagnostic evaluations, such as those we did, with every student. At a minimum, we suggest a kind of layered approach to assessment in which

> teachers first work diagnostically with students who have demonstrated difficulty on broad measures of reading. Then, they can work with other students as the need arises. (Valencia & Buly, 2004, p. 528)

Reading assessment in any form is not an easy task. Administering assessment after assessment for the purpose of recording scores will accomplish nothing (Valencia, & Buly, 2004). The value of assessment comes from educators having a deep understanding of the reading processes and using the information to inform instruction (Valencia & Buly, 2004). Minimal studies have examined teachers' perceptions of training and competence related to reading assessment for special populations. In addition, studies have revealed that classroom teachers feel unprepared and incompetent to work with students with diverse needs, such as students with EBD (e.g., Maag & Katsiyannis, 1999). Evidence supports that teacher preparation contributes to enhancing student achievement (Bos et al., 2001). Therefore, when teachers lack training and certification to effectively instruct students with special needs, student achievement may be compromised (Landrum, et al., 2003).

2.4 Teachers' Perceptions of Training and Competence

2.4.1 Special Education (Licensed vs. Non-licensed)

While students continue to be identified for receiving special services, the availability of qualified special education teachers is diminishing (Bargerhuff, Dunne, & Renick, 2007; Boe & Cook, 2006). Nationally, 98% of school districts reported shortages of certified special education teachers (Bergert & Burnette, 2001). As a result of this shortage, general education teachers who do not have the training and certification are being hired to teach special education students (Boe & Cook, 2006). Thirty-three

thousand special education positions are allotted to uncertified teachers, while 4000 special education positions remain vacant (US. Department of Education, OSEP, 2000).

Nougaret, Scruggs, and Mastropieri (2005) investigated the effectiveness of traditionally licensed and nontraditionally licensed special education teachers. Forty participants were chosen for this study and placed into two groups. Twenty first year special education teachers who were traditionally licensed (e.g., completed an approved college or university education program, and a student teaching assignment) were placed in group one. The second group consisted of 20 first year special education teachers who were non-traditionally licensed (e.g., held a degree in an area other than education and were currently enrolled in a licensed program which required no more than 6 credit hours). The observation instrument in this study was based on Danielson's Framework for Professional Practice (1996). This framework divides teaching into four major domains: planning and preparation; classroom environment; instruction; and professional responsibilities. Teachers were evaluated through a self-assessment survey corresponding with these four domains. In addition, each teacher was observed on two occasions and evaluated in each domain. Element scores were added for each domain, and independent t-tests were conducted on teacher observations on each of the domains. Results indicated that traditionally licensed teachers substantially outperformed non-traditionally licensed teachers in planning, preparation, classroom environment, and instruction. Effect sizes ranged from 1.57 to 1.68 standard deviations between groups. The results suggested that teacher preparation programs were effective in providing teachers with some degree of effective teaching skills. However, the licensed teachers in this study were deemed more effective in meeting the needs of students with disabilities.

> It seems clear, then, that states, the federal government, and local school districts must do everything possible to promote quality special education teacher education and to limit the extent to which under trained – and less effective – teachers are given responsibility for educating the nation's children with disabilities. (Nougaret et al., 2005, p. 227)

It is imperative that teachers receive positive support systems, classroom experience prior to teaching, and instruction and guidance regarding curriculum design, multiculturalism, lesson planning, assessment, and content standards (Zientek, 2007). Therefore, how teacher education programs are training special education teachers to meet the needs of specific populations, such as students with emotional and behavioural disorders, should be investigated.

2.4.1.2 Educating Students with EBD. Students with emotional and behavioural disorders (EBD) exhibit both learning and behavioural problems making it challenging for classroom teachers to provide effective instruction (Sutherland, Lewis-Palmer, Stichter, & Morgan, 2008). A wealth of literature supports that students with EBD experience significant deficits in their school experience (e.g., Cook et al., 2003; Landrum et al., 2003; Nelson, 2000; Wagner et al., 2005). Yet, classroom teachers who are expected to meet the diverse needs of this population feel unprepared and under trained to meet the behavioural and the academic needs of their students (Cook et al., 2003; Maag & Katsiyannis, 1999; Mock & Kauffman, 2002; Tankersley et al., 2004). Teachers are not being taught research-validated practices to meet the needs of students with EBD, and place some of the blame on teacher educators (Tankersley, Landrum, & Cook, 2004). Often, the diverse academic and behavioural needs of a child with EBD are

solely the responsibility of a classroom teacher, who likely possesses no more than three credit hours of university training in special education (Mock & Kauffman, 2002). There seems to be a common misconception that behaviour management and social skill development are the most critical areas needed to be addressed with students with EBD, which often becomes of the focus of the curriculum (Knitzer et al., 1990). Evidence supports that this focus often has negative outcomes for students with EBD such as, less exposure to academic content thus allowing students with EBD to fall even further behind (e.g., Knitzer et al., 1990, Mock & Kauffman, 2002). Regardless, classroom teachers are expressing that they lack the training and preparation in *both* of these crucial areas (Begeny & Martens, 2006).

Maag and Katsiyannis (1999) investigated teacher training programs at colleges and universities throughout 41 states. Many teachers of students with EBD have not received any specific training, other than a basic behaviour management course in their undergraduate studies (Maag & Katsiyannis, 1999). These researchers set out to examine: (1) program requirements and competencies for training undergraduate and graduate students to work with students with EBD; and (2) the link between the training program requirements and particular competencies outlined in the literature as best practice for students with EBD were examined. A survey was distributed to 219 post secondary schools that included three sections: (1) demographic information; (2) nature of program requirements (e.g., graduate versus undergraduate, field experience, prerequisite requirements); and (3) review schedule for program requirements (e.g., number of graduates, grant support). One hundred and one surveys were returned (i.e., response rate of 46%). The results indicated that the majority of teacher training regarding students

with EBD occurred at the graduate level of studies. While this may seem distressing, Kauffman and Hallahan (2005) considered this to be best practice. They suggested that teachers should not receive explicit training in this area until they have several years of teaching experience, because of the profound challenges presented by these individuals (Kauffman & Hallahan, 2005). The majority of program competencies were related to instruction, assessment, and behaviour management, which the authors noted as a positive finding for improving the outcomes for students with EBD. However, they acknowledged that the lack of focus on counselling skills, and multicultural and medical issues was disconcerting since these are important areas in meeting the needs of students with EBD. Maag and Katsiyannis (1999) proposed that states should implement an EBD certification to help eradicate the dismal outcomes (e.g., drop-outs, involvement with the justice system) for students with EBD. Currently, only 50 percent of the states have this certification, and even in those states teachers who have no specialized training are teaching students with EBD (Maag & Katsiyannis, 1999). It is unfortunate that the students who require the most assistance are often receiving the lowest quality of assistance due to minimal training (Sutherland et al., 2002). One problem in the area of special education is locating teachers qualified to deliver instruction to this population of students (Nougaret, Scruggs, Mastropieri, 2005; Sack, 1999). There is a shortage of qualified special education teachers, and therefore, unlicensed or uncertified teachers are being placed in these positions (Nougaret et al., 2005).

Sutherland, Denny, and Gunter (2005) investigated teacher perceptions of competence and professional development needs between fully licensed and emergency-licensed teachers of students with EBD. Participants completed a survey in which they

rated their teaching ability relating to students with EBD (e.g., writing IEP's, classroom management, instruction). Questions on this survey utilized a four point Likert scale ranging from 1 (not at all comfortable) to 4 (very comfortable). Independent t-tests were used to examine the differences between licensed and emergency licensed teachers on six factors, including: planning instruction; instruction; behaviour; social skills; classroom management; families; and collaboration. Both emergency and licensed teachers' felt most comfortable in collaboration, and least comfortable in providing academic instruction to students with EBD. Significant differences were noted between the groups for planning instruction ($t(1, 103) = 2.17$, $p = .032$) and classroom management ($t(1, 101) = 2.89$, $p = .005$). Fully licensed teachers noted superior feelings of competence in these two areas in comparison to emergency licensed teachers. "The results suggest that teachers of students with EBD need both (a) better pre-service and in-service preparation to provide high-quality instruction to their students and (b) improved supports to allow them to better meet the academic needs of their students" (Sutherland, Denny, & Gunter, 2005, p. 44). The authors acknowledged some suggestions for improvement, which included: supports in teacher training programs; formal mentoring; and curricular supports. The results of this study suggested teachers' perceptions of their ability to deliver effective instruction to students with EBD is not optimal. Although both groups of teachers felt incompetent and unprepared to deliver effective instruction, this was especially true for emergency licensed educators. This finding is somewhat alarming since students with EBD continue to struggle in school, and the teachers of these individuals continue to feel unprepared to address their needs (Sutherland, et al., 2005). If teachers of students with EBD feel limited in their ability to provide academic

instruction (Sutherland, et al, 2005), it seems safe to assert one of these academic areas is the area of reading.

2.4.1.3 Reading Instruction for Students with EBD. The academic reading difficulties that students with EBD experience may be due to the lack of quality instruction these students receive, often as a result of their disruptive behaviour (Sutherland, Wehby, & Yoder, 2002). Many teachers believe that students with EBD cannot be taught academic skills, such as reading, until they are taught ways to manage their behaviour. Therefore, students with EBD are not receiving adequate instructional time in academic areas, specifically in reading (e.g., Alber-Morgan, Ramp, Anderson, & Martin, 2007; Lane, Gresham, & O'Shaughnessy, 2002; Levy & Vaughn, 2002; Vaughn, Levy, Coleman, & Bos, 2002).

In a study conducted by Mather, Bos, and Babur (2001), the authors sought to examine pre-service and in-service teachers' perceptions and knowledge of delivering reading instruction to students deemed at risk. Classroom teachers must possess an extensive knowledge base to deliver effective reading instruction to this population of students:

> To teach reading to children at risk for reading failure as well as to those with learning disabilities, teachers need to possess positive perceptions regarding the role of systematic, explicit instruction and a knowledge of language structure. They have to believe that children who struggle to learn to read require reading approaches that teach sound-symbol correspondences directly. Moreover, they need to have an awareness of language elements (e.g., phonemes) and a knowledge of how these elements are represented in writing....Teachers also need a thorough

> understanding of the relationship between poor phonological awareness and reading failure, as well ask a knowledge of how to implement activities in classroom instruction to develop phonological awareness. (Mather, Bos, & Babur, 2001, p. 472)

Two hundred and thirty-nine pre-service and 131 in-service teachers participated in this study and completed two measures: (1) a survey that examined teacher perceptions of early literacy instruction; and (2) an assessment examining teacher knowledge regarding early literacy instruction. The Teacher Perceptions Survey was adapted from a tool developed by DeFord (1985), which sought to differentiate between phonics, skills, and whole language. The Teacher Knowledge Assessment included a 22-item multiple-choice assessment that explored teachers' knowledge of the English language. Results indicated that although in-service teachers were more knowledgeable of the structure of language, both groups were inadequately prepared to deliver effective early literacy instruction. On the knowledge assessment tool, the pre-service teachers averaged 50% of questions correct while the in-service group averaged 68% correct. Both groups of teachers demonstrated positive perceptions regarding the importance of implicit, holistic instruction in children's' reading development. However, classroom teachers with three or more years of experience possessed a more positive view on the importance of explicit instruction in teaching reading. Results from this study suggested that many teachers lack knowledge of the language structure that is essential to effectively teach struggling readers. "Few of the pre-service teachers in this study had the competencies necessary to provide instruction in word identification skills with children who are struggling to learn to read" (Mather et al., 2001, p. 480).

Students with reading and behavioural difficulties will continue to be left behind until effective reading interventions are implemented (Rivera et al., 2006). It is important to deliver sound reading instruction based on research-based practices when working with students with emotional and behaviour disorders (e.g., Landrum et al., 2003; Nelson, 2000; Vaughn et al., 2002), However, if classroom teachers lack the appropriate training and knowledge to deliver research-based instruction to students with EBD (e.g., Cook et al., 2003; Mock & Kauffman, 2002; Tankersley, Landrum, & Cook, 2004), then the quality of reading instruction these individuals receive is affected (Lane et al., 2002; Sutherland, Wehby, & Yoder, 2002; Vaughn et al., 2002). A reciprocal connection exists between reading assessment and reading instruction (Cobb, 2003). If literature is suggesting that teachers are feeling incompetent in delivering effective reading interventions for students with EBD, it seems plausible to explore literature regarding reading assessment for students with EBD.

2.5 Reading Assessment

Teachers' perceptions regarding content knowledge and competence have a considerable effect on student outcomes (Bos et al., 2001). An extensive database search found one study examining educators' perceptions of training and competence in the area of reading assessment. Nelson and Machek (2007) examined school psychologists' perceptions regarding training, practice and competence in reading assessment and intervention. The study investigated seven areas of reading assessment and intervention including: (1) competence and knowledge related to reading assessment; (2) competence and knowledge related to reading intervention; (3) current practices in reading assessment; (4) purposes of reading evaluations; (5) current practices in reading intervention; (6) training in reading assessment and intervention; and (7) future training

needs in reading assessment and intervention. Four hundred and ninety-six participants responded to a 42-item survey, utilizing a 4-point Likert scale (Fish & Margolis, 1998). Responses were correlated with participants' age and years of experience. In regards to training and perceptions of competence and knowledge in reading assessment, over 40% of the school psychologists reported their knowledge to be moderately low to low, while 43% of participants were not required to take any graduate courses that specifically covered the areas of reading assessment and remediation. While 69% were required to take only one or even fewer courses in these areas, approximately 75% of participants reported they did not take any elective courses related to the area of reading, and just over 90% took only one or fewer elective courses in reading. Participants reported that the amount of time devoted to assessment and intervention of reading problems was minimal. Similar findings were reported by non-doctoral and doctoral students regarding their graduate courses. This is an alarming finding, since reading problems are the most frequent referrals for school psychologists (i.e., comprising 57% of referrals; Nelson & Machek, 2007). Over 80% of the sample reported the need for more training in reading assessment and reading interventions. Ninety-two percent of participants suggested that more training in this area would be of great benefit to school psychologists. The large number of participants that reported limited knowledge of early indicators of reading difficulties is disturbing, since school psychologists typically play a large role in the identification of these reading deficits. The results of this study indicated that school psychologists are feeling incompetent in the area of reading assessment. If school psychologists believe they lack the necessary training and knowledge to be effective in this area, it seems reasonable to assume the same for classroom teachers. "To date, little

is known about teachers' beliefs and everyday practices regarding reading assessment" (Rueda & Garcia, 1994, p. 1). Even less is known about teachers' beliefs regarding reading assessment for special populations.

2.6 Summary

There is an axiomatic link between reading failure and students with emotional and behavioural disorders (e.g., Rivera et al., 2006; Vaughn et al., 2002; Wehby et al., 2003). Yet, there are limited findings regarding reading interventions for students with EBD (e.g., Coleman & Vaughn, 2000; Cook et al., 2003). Extensive database searches found no published studies investigating teacher perceptions of reading *assessment* for students with emotional and behavioural disorders**.** It is the responsibility of the classroom teacher to determine selection, balance, and consistency of assessment practices. Therefore, teachers' perceptions regarding assessment, including training, capability, and practice determine the direction of reading assessment practices in the future (Campbell, 2001). Reading assessment is not just about choosing the appropriate assessment tools, but also includes the teachers' knowledge of the reading process, knowledge of reading assessment, knowing what to assess, and then using the results to inform instruction (Campbell, 2001).

There is great need for further research in the area of reading assessment and students with EBD. Studies that have investigated the relationship between teacher knowledge, perception, and practice have found that there is a definite influence on student learning and achievement (e.g., Bos et al., 2001). The status of teachers' levels of training, preparation, and practice for this area is largely unknown. Considering the dismal statistics regarding reading achievement and students with EBD, this area should

be explored. Extensive literature supports that students with EBD experience significant reading deficits (e.g., Anderson et al., 2001; Coleman & Bos, 2002; Vaughn et al., 2002; Wehby et al., 2003), yet little is known about reading assessment for this population of individuals. To date, there is no comparison in the literature regarding pre-service versus in-service teachers' perceptions relating to reading assessment and students with EBD. Considering the relationship between assessment and instruction, and the current reading status of students with EBD, it seems imperative that educators' perceptions of training, competence, and practice be explored to help identify promising reading interventions. The question remains, what are classroom teachers' perceptions regarding training, competence, and past and present practices surrounding reading assessment for students with emotional and behavioural disorders?

Chapter 3: Methodology

3.1 Nature of the Study

Although students with EBD experience deficits in the area of reading (Anderson et al., 2001) research pertaining to interventions for this population of students remains limited (Levy & Vaughn, 2002). Educators have expressed they lack training and experience to deliver effective reading instruction and intervention to students with EBD (e.g., Bos et al., 2001; Levy & Vaughn, 2002; Moats & Foorman, 2003). Extensive database searches revealed little to no research pertaining to reading assessment for students with EBD. The purpose of this study was to investigate pre-service and in-service teachers' levels of training, perceptions of competence, and current and past practices they have used to assess the reading skills of students with EBD. The following research questions guided this study:

1. What are teachers' levels of training regarding reading assessment for students with emotional and behavioural disorders (EBD)?
2. What are teachers' perceptions of competence regarding reading assessment for students with EBD?
3. What are teachers' past and present practices (e.g., formal or informal testing) regarding reading assessment for students with EBD?

3.2 Participants

Approximately 200 pre-service and in-service teachers were invited to participate in this study. Pre-service teachers were enrolled in a teacher education degree program at a Western Canadian university. The majority of in-service teachers were employed by a large urban school division in Western Canada. Of the eligible participants, 175 teachers responded to the survey resulting in a response rate of approximately 87.5%. Initially,

this study set out to investigate pre-service and in-service teachers' levels of training, perceptions of competence, and current and past practices they have used to assess the reading skills of students with EBD. However, due to the small number of pre-service teachers opting to participate in the study (n=6) a comparison of this nature could not be made. Teachers' responses were instead considered in relation to other teacher characteristics (i.e., primary role in the school, years of experience).

3.3 Instrumentation

Nelson and Machek (2007) created a survey that targeted the training and practice of school psychologists relating to reading assessment and intervention (see Appendix A). Specifically, the purpose of this survey was to investigate school psychologists' perceptions regarding reading assessment and intervention. This survey contained 42 questions divided into six sections: (1) General Information; (2) Training; (3) Reading Assessment and Remediation; (4) Early Reading Intervention; (5) Reading Intervention/Consultation; and (6) Current Practice. Survey questions were not grouped by the test designers to create underlying factors. No reliability or validity evidence was reported to have been collected with this version of the survey. However, prior to finalizing the survey, it was piloted to practicing school psychologists, graduate students, and a faculty to member to identify any items subject to interpretations. A number of changes were made to the original survey to facilitate the purposes of this study. First, items were revised and omitted to target teachers' perceptions of their training and practice relating to reading assessment and intervention rather than school psychologists. For example, the sections entitled, Early Reading Intervention and Reading Intervention/Consultation were omitted since they did not pertain to this study. In the General Information section, eight out of ten questions were used to determine demographic variables such as: age; gender; and years of experience. Several questions were also omitted since they were not related to the purposes of this particular study (i.e., race/ethnicity, school psychologist to student ratio). In addition, the term

remediation was replaced with *intervention*, as this term was more frequently used in the literature review to describe the process of detection and prevention of reading failure. Second, questions were revised to elicit information about teachers' perceptions of reading assessment and intervention as it relates to students with EBD. For example, questions relating to training, practice, or competence for students in general (e.g., indicate the amount of time your educational training program devoted to: assessment and intervention of reading difficulties) were followed by the same question reworded to ask about training, practice, and competence relating to students with EBD (e.g., indicate the amount of time your educational training program devoted to: assessment and intervention of reading difficulties for students with EBD). The same question was then reworded to ask about training, practice, and competence relating to behaviour management skills and strategies (e.g., Indicate the amount of time your educational training program devoted to: behaviour management skills/strategies for students with EBD). In addition, three open-ended questions were included to elicit information regarding teachers' perceptions of reading assessment for students with EBD.

The finalized version of the *Survey of the Training and Practice in Reading Assessment and Intervention for Students with Emotional and Behavioural Disorders (EBD)* was used in this study (see Appendix B). This version of the survey consisted of 24 questions divided into four sections: (1) General Information; (2) Training; (3) Reading Assessment and Intervention; and (4) Current Practice.

3.4 Data Collection

Upon ethics approval from the Office of Research Services at the University of Saskatchewan (see Appendix C), permission to recruit potential participants was requested from: (1) the Director of Education for one urban school division in Western Canada; and (2) various university professors teaching undergraduate education courses at a Western Canadian university. Once school division approval was received, a request

was then made to principals, in person or in writing, to invite in-service teachers in their schools to voluntarily participate in this study. When approval was received from individual professors, pre-service teachers were also invited to voluntarily participate in this study at the beginning or end of their undergraduate courses. Surveys were delivered by mail, or in person, to various schools in the participating school division, and to undergraduate pre-service teachers interested in participating in the study. In addition, several surveys were mailed to individuals who had heard about the study by word of mouth and volunteered to participate from other areas in Western Canada. A written protocol for survey administration and consent forms were distributed to all participants prior to completing the questionnaire (see Appendix D).

3.5 Data Analysis

Data was entered and analyzed using the Statistical Package for the Social Sciences (SPSS). All survey data was checked multiple times to ensure 100% verification of data.

Independent teacher variables that were collected included pre-service and in-service teachers' gender, years of experience, level of education attained, and grade level area taught (e.g., elementary, middle, high school). The four-point Likert scale in questions 8 through 16, and 23 to 24 that addressed teachers' perceptions of training, competence, and practice were described through measures of central tendency (i.e., mean) and measures of variability (i.e., standard deviation).

Dependent variables in this study included participants' responses to survey items relating to: levels of training, perceptions of competence, and past and present practices relating to reading assessment for students with EBD.

3.5.1 Research Question 1

The first research question posed was: what are teachers' levels of training regarding reading assessment for students with EBD?

Descriptive analyses including measures of central tendency and variability were conducted. Analyses of variance (ANOVA's) were used to examine the mean responses of teachers' training. Eta squared ($\eta 2$), an estimate of effect size often used with ANOVA designs, was used to estimate the importance of the treatment relationship (i.e., the size of the effect) of the independent variable on the dependent variable (Ness Evans, 2008). Post-hoc analyses (e.g., Scheffé) were then used to determine the location of the main effect when ANOVA's revealed a statistically significant mean.

3.5.2 Research Question 2

The second research question posed was: what are teachers' perceptions of competence regarding reading assessment for students with EBD?

Descriptive analyses including measures of central tendency and variability were conducted. Analyses of variance (ANOVA's) were used to compare the mean response of teachers' perceptions of competence. Eta squared ($\eta 2$), an estimate of effect size often used with ANOVA designs, was used to estimate the importance of the treatment relationship (i.e., the size of the effect) of the independent variable on the dependent variable (Ness Evans, 2008). Post-hoc analyses (e.g., Scheffé) were then used to determine the location of the main effect when ANOVA's revealed a statistically significant mean.

3.5.3 Research Question 3

The third and final research questions posed was: what are teachers' past and present

practices (e.g., formal and/or informal tests) regarding reading assessment for students with EBD?

Descriptive analyses including measures of central tendency and variability were conducted. Analyses of variance (ANOVAs) were used to compare the means of teachers' current and prior methods of reading assessment practices. Eta squared ($\eta 2$), an estimate of effect size often used with ANOVA designs, was used to estimate the importance of the treatment relationship (i.e., the size of the effect) of the independent variable on the dependent variable (Ness Evans, 2008). Post-hoc analyses (e.g., Scheffé) were then used to determine the location of the main effect when ANOVA's revealed a statistically significant mean. In addition, two open-ended questions were included to elicit information regarding teachers' past and present practices regarding reading assessment for students with EBD.

Results of the data analyses are presented in chapter four and implications of the results are discussed in chapter five.

Chapter 4: Results

4.1 Introduction

This study examined educators' perceptions of reading assessment for students with emotional and/or behavioural disorders. The present study set out to answer the following research questions:

1. What are teachers' levels of training regarding reading assessment for students with emotional and behavioural disorders (EBD)?
2. What are teachers' perceptions of competence regarding reading assessment for students with EBD?
3. What are teachers' past and present practices (e.g., formal or informal testing) regarding reading assessment for students with EBD?

In order to investigate these questions, surveys were distributed to approximately 200 teachers. The survey included demographic questions (e.g., age, years of experience), and a series of statements that inquired about teachers' level of agreement regarding training, competence, and past and present assessment practices related to students with EBD (e.g., very much disagree, agree, unimportant, important). Two open-ended questions were included to elicit information regarding reading assessment practices. In addition, participants were invited to share any additional insights regarding this topic through responses to an open-ended question at the end of the survey. Of the approximately 200 surveys that were distributed, 175 were returned resulting in an approximately 87.5% response rate. The majority of respondents were classroom teachers (65%) with a bachelor's degree (81%).

Descriptive analyses were conducted to examine participants' demographic information (e.g., gender, years of experience) and provided insight regarding who

participated in the survey (e.g., classroom teachers, special education teachers, administrators). Univariate analyses of variance (ANOVAs) (e.g., to compare the mean responses of classroom teachers, administrators, and special education teachers) were utilized to determine if statistically significant differences existed between the variables (i.e., perceptions of training, competence, and past and present assessment practices). Survey questions were not grouped by the test designers to create underlying factors. Therefore, single questions were treated as separate dependent variables.

4.2 Research Question Results

4.2.1 Research Question 1

The first research question posed was: what are teachers' levels of training regarding reading assessment for students with EBD?

When reporting their years of teaching experience, 55% of the 175 respondents had ten or more years of teaching experience, while 19% reported having less than five years (see Table 4.1). Sixty-five percent of respondents were classroom teachers, 15% were special education teachers, 5% were administrators, 3% were pre-service teachers, and 9% worked in the school system in other school roles (i.e., SLP). The questionnaire asked respondents to recall the approximate number of undergraduate, graduate, or professional development courses they completed that were devoted to reading assessment and instruction for general populations and for students with EBD. When respondents were asked about university coursework they had taken related to students with EBD, 77% reported they had not taken any undergraduate university courses on reading instruction (e.g., 0 courses) while 80% reported they had not taken any undergraduate university courses on reading assessment. Respondents were also asked about professional development courses or workshops they had taken related to students with EBD.

Table 4.1

Participants' Demographic Information

Teaching Experience	N	%
0 years	10	5.7
1-4 years	34	19.4
5-9 years	35	20.0
10 + years	96	54.9
Total	175	100
School Role	**N**	**%**
0	6	3.4
Classroom Teacher	113	64.6
Special Education Teacher	26	14.9
Administrator	8	4.6
Pre-service Teacher	6	3.4
Other	16	9.1
Total	175	100
Educational Attainment	**N**	**%**
0	1	0.6
Bachelor of Education	141	80.6
Master's Degree	17	9.7
Other	16	9.1
Total	175	100
Gender	**N**	**%**
Male	32	18.3
Female	143	81.7
Total	175	100

Note. N= sample size, %= percentage, 0= participant left out question

Eighty-seven percent reported they had not taken any professional development courses on reading instruction for students with EBD; eighty-nine percent reported that they did not have any additional professional development in the area of reading assessment.

Nine statements reported by a four-point Likert scale measured teachers' perceptions of educational training of reading assessment and behaviour management for students with EBD (e.g., very much disagree indicated by a 1, to very much agree, indicated by a 4). Analyses of variance (ANOVA's) were used to examine where differences existed between and within the means of the groups (e.g., classroom teacher, special education teacher) on the dependent variables that measured perceptions of training (e.g., amount of educational training; see Table 4.2). Questions were not grouped by the test designers to create underlying factors. Therefore, single questions were considered for analyses that related directly to the research questions posed. Three questions directly related to teachers' perceptions of training were used in analyses to answer the first research question. The questions included: (1) indicate the amount of training devoted to reading assessment and intervention; (2) it would have been beneficial if my education training program devoted more time to the area of reading assessment for students with EBD; and (3) how would you rate the quality of training you received with respect to reading assessment strategies. Due to the increased chance of a Type I error when conducting multiple ANOVAs, the alpha level was set at ($p \leq 0.02$). This restricted alpha level was calculated by dividing alpha (i.e., 0.05) by the number of tests run (i.e., 3). Effect size was calculated for all statistically significant results using eta squared ($\eta 2$). The analyses of variance (ANOVAs) revealed statistically significant differences between the primary school roles of participants and their reported amount of educational training devoted to

Table 4.2
Analysis of Variance for Teacher Training

Dependent Variable	Primary School Role (IV)	Mean	F Value	df	Effect Size	PC
Amount Educational Training Devoted to Reading Assessment and Intervention	Preservice Teacher	2.000	3.573*	5, 169	0.10	3>1,2 4,5
	Classroom Teacher	2.239				
	Special Education Teacher	2.923				
	Administrator	2.000				
	Other	2.250				
Would have liked more training in reading assessment for students with EBD	Preservice Teacher	3.167	2.859*	5, 169	0.08	
	Classroom Teacher	3.310				
	Special Education Teacher	3.615				
	Administrator	3.875				
	Other	2.875				
Quality of training in reading assessment	Preservice Teacher	2.500	2.900*	5, 169	0.08	
	Classroom Teacher	2.283				
	Special Education Teacher	2.923				
	Administrator	2.500				
	Other	2.500				

Note. df = degrees of freedom; PC represents pair wise comparisons; 1= Preservice Teacher; 2= Classroom Teacher, 3= Special Education Teacher; 4 = Administrator; 5 = Other. *p<.02

N = 169.

reading assessment and intervention. There were significant differences among primary school role on the following questions: (1) the amount of educational training devoted to reading assessment and intervention [F (5, 169) = 3.573, p=.004, $\eta 2 = 0.10$]; (2) would have been beneficial if training program devoted more time to reading assessment for students with EBD [F (5, 169) = 2.859, p=.017, $\eta 2 = 0.08$]; and (3) how would you rate the quality of training in reading assessment [F, (5, 169) = 2.900, p=.015, $\eta 2 = 0.08$]. Eta squared ($\eta 2$), an estimate of effect size often used with ANOVA designs, was used to estimate the importance of the treatment or relationship (i.e., the size of the effect) of the independent variable on the dependent variable (Ness Evans, 2008). A value of 0.01 is considered a small effect size, 0.06 a medium effect size, and 0.14 a large effect size (Ness Evans, 2008). A medium effect size was calculated among the groups indicating the difference is noticeable among the roles of teachers (e.g., classroom teacher, special education teacher) regarding perceptions of training.

Sheffé post hoc analyses were then used to determine the location of the main effect when ANOVA's revealed a statistically significant mean difference. The dependent variable (amount of training devoted to reading assessment and intervention) revealed a significant mean difference between classroom teachers (N=113, M=2.239) and special education teachers (N=26, M=2.923; p=0.012). Although the ANOVA revealed significant differences for the remaining dependent variables regarding training (e.g., would have liked more training in reading assessment for students with EBD, and quality of training in reading assessment) and the independent variable (primary school role), post hoc analyses of simple comparisons did not find significant differences between the groups (i.e., pre-service teachers or administrators).

4.2.1.2 Accuracy of Recall

Upon completion of the questions regarding training, participants were invited to answer a question pertaining to accuracy of recall. The question stated: pertaining to the items in this survey, how accurately were you able to recall your educational training (i.e., university course content)? Responses were reported by a four-point Likert scale (e.g., not very accurately indicated by a 1, to very accurately, indicated by a 4). Approximately 17.1% of respondents responded not very accurately, 33.1% responded with moderate accuracy, 36.6% believed their responses to be accurate, while 12% felt their responses were very accurate.

4.2.2 Research Question 2

The second research question posed was: what are teachers' perceptions of competence regarding reading assessment for students with EBD?

Teacher perception of competence in the area of reading assessment for students with EBD was evaluated through nine statements (e.g., In regards to teaching students with EBD, how confident do you feel in the area of: (1) reading intervention; (2) reading assessment; and (3) behaviour management strategies?). The questionnaire asked respondents to rate their level of confidence and expertise relating to reading instruction, reading assessment, and behaviour management strategies. Respondents used a four point Likert scale to respond to questions that ranged from 1 (e.g., not at all confident or low) to 4 (e.g., very confident or high). Forty-four percent of respondents reported a moderate level of expertise in interventions for reading problems for typically achieving students and students with EBD. When respondents were asked about how confident they felt in relation to students with EBD, 49.1% reported a low level of confidence in reading intervention, and 40.6% reported a low level of confidence in reading assessment. Less

than 5% of respondents stated they were very confident in reading intervention, and 6.9% stated they were very confident in reading assessment (see Table 4.3). Analyses of variance (ANOVAs) were used to investigate differences that may exist between and within the means of the groups (i.e., primary school roles, years of experience) on the dependent variables that measured reading competence (i.e., perceptions of competence). The independent variables included primary school roles (e.g., classroom teacher, special education teacher, administrator, pre-service teacher, and other), and years of experience (e.g., 0 years, 1-4 years, 5-9 years, and 10+ years). Four questions directly assessing respondents' expertise and confidence related to reading assessment were chosen to be analyzed to answer the second research question. The questions included: (1) how would you rate your expertise in interventions for reading problems; (2) how would you rate your expertise in interventions for reading problems for students with EBD; (3) in regards to teaching students with EBD, how confident do you feel in the areas of reading intervention; and (4) in regards to teaching students with EBD, how confident do you feel in the areas of reading assessment. Due to the increased chance of a Type I error when conducting multiple ANOVAs, the alpha level was set at ($p \leq 0.013$). The restricted alpha was calculated by dividing alpha (0.05) by the number of tests run (4). Effect size was calculated for all statistically significant results using eta squared ($\eta 2$) to estimate the importance of the treatment or relationship (i.e., the size of the effect) of the independent variable on the dependent variable (Ness Evans, 2008).

Table 4.3

Participants' Expertise in interventions for:

Reading Problems	N	%
1 (Low)	10	5.7
2	34	19.4
3	35	20.0
4 (High)	96	54.9
Reading Problems for students with EBD	**N**	**%**
1 (Low)	45	25.7
2	81	46.3
3	41	23.4
4 (High)	3	1.7

Participants' Confidence in areas of:

Reading interventions for students with EBD	N	%
1 (not at all confident)	23	13.1
2	86	49.1
3	58	33.1
4 (very confident)	6	3.4
Reading assessment for students with EBD	**N**	**%**
1 (not at all confident)	19	10.9
2	71	40.6
3	71	40.6
4 (very confident)	12	6.9

Note. N= sample size, %= percentage, N value may not add up to 175 due to missing values

The first independent variable considered was primary school role. The ANOVAs revealed statistically significant differences between the primary school roles of participants and their reported perceptions of competence devoted to reading assessment and intervention (see Table 4.4). There were significant differences among primary school role on the following questions: (1) how would you rate your expertise in the area of reading interventions [$F (5, 169) = 4.397$, $p=.001$, $\eta 2 = 0.12$]; (2) how would you rate your expertise in reading interventions for students with EBD [$F (5,169) = 3.252$, $p=.008$, $\eta 2 = 0.09$]; and (3) in regards to teaching students with EBD, how confident do you feel in the areas of reading assessment [$F, (5, 169) = 3.397$, $p=.006$, $\eta 2 = 0.09$]. A medium effect size was calculated among the groups indicating the difference is noticeable among the roles of teachers (e.g., classroom teacher, special education teacher) regarding perceptions of competence. The ANOVA did not reveal a significant difference between primary school role on respondent's levels of confidence in reading intervention for students with EBD.

Scheffé post hoc analyses were then used to determine the location of the main effect when ANOVA's revealed a statistically significant mean difference. The first question asked: "How would you rate your expertise in the area of reading interventions?" The dependent variable (level of expertise) revealed a significant mean difference between classroom teachers (N=113, M=2.416) and special education teachers (N=26, M=3.039; p=0.001). Although the ANOVA revealed significant differences between and within groups for the other two dependent variables regarding teachers' perceptions of competence, post hoc analyses of simple comparisons did not find

Table 4.4
Analysis of Variance for Teacher Competence

Dependent Variable	Primary School Role (IV)	Mean	F Value	df	Effect Size	PC
Expertise in reading interventions	Pre-service Teacher	1.833				
	Classroom Teacher	2.416				
	Special Education Teacher	3.039	4.397*	5, 169	0.12	3>1,2, 4,5
	Administrator	2.375				
	Other	2.375				
Expertise in reading interventions for students with EBD	Preservice Teacher	1.333				
	Classroom Teacher	1.885				
	Special Education Teacher	2.423	3.252*	5, 169	0.09	
	Administrator	1.875				
	Other	2.125				
Confidence in reading intervention for students with EBD	Preservice Teacher	1.333				
	Classroom Teacher	2.248				
	Special Education Teacher	2.539	2.764	5, 169	0.08	
	Administrator	2.000				
	Other	2.250				
Confidence in reading assessment for students with EBD	Pre-service Teacher	1.500				
	Classroom Teacher	2.407				
	Special Education Teacher	2.808	3.397*	5, 169	0.09	
	Administrator	2.000				
	Other	2.313				

Note. df = degrees of freedom; PC represents pair wise comparisons; 1= Preservice Teacher; 2= Classroom Teacher, 3= Special Education Teacher; 4 = Administrator; 5= Other. *p<.013. N=175

significant differences between the groups.

The second independent variable considered was years of teaching experience. The ANOVAs revealed statistically significant differences between the respondents' years of teaching experience (e.g., 0 years, 1-4 years, 5-9 years, and 10+ years) and the dependent variables (e.g., perceptions of competence; see Table 4.5). There were significant differences among years of teaching experience on: (1) how would you rate your expertise in the area of reading interventions [F (3, 171) = 3.921, p=.010, $\eta 2 = 0.06$]; (2) how would you rate your expertise in reading interventions for students with EBD [F (3, 171) = 4.199, p=.007, $\eta 2 = 0.07$]; and (3) in regards to teaching students with EBD, how confident do you feel in the areas of reading intervention [F, (3, 171) = 4.100, p=.008, $\eta 2 = 0.07$]. A medium effect size was calculated among the groups indicating the difference is noticeable among teachers' years of experience and perceptions of competence. The ANOVA did not reveal a significant difference between years of teaching experience on respondent's levels of confidence in reading assessment for students with EBD.

Scheffé post hoc analyses were then used to determine the location of the main effect when ANOVA's revealed a statistically significant mean difference. The second question asked: "How would you rate your expertise in the area of reading interventions for students with EBD?" The dependent variable (level of expertise) revealed a significant mean difference between teachers with 0 years experience (N=10, M=1.200) and teachers with ten or more years of experience (N=96, M=2.094; *p*=.012). Although the ANOVA revealed significant differences for the other three dependent variables regarding perceptions of competence, post hoc analyses of simple comparisons did not

Table 4.5
Analysis of Variance for Teacher Competence

Dependent Variable	Years of Experience (IV)	Mean	F Value	df	Effect Size	PC
Expertise in reading interventions	0 years experience	1.800				
	1-4 years experience	2.353				
	5-9 years experience	2.486	3.921*	3, 171	0.06	
	10+ years experience	2.594				
Expertise in reading interventions for students with EBD	0 years experience	1.200				
	1-4 years experience	1.853				
	5-9 years experience	1.886	4.199*	3, 171	0.07	4>1, 3,2
	10+ years experience	2.094				
Confidence in reading intervention for students with EBD	0 years experience	1.500				
	1-4 years experience	2.147				
	5-9 years experience	2.371	4.100*	3, 171	0.07	
	10+ years experience	2.312				
Confidence in reading assessment for students with EBD	0 years experience	1.900				
	1-4 years experience	2.382				
	5-9 years experience	2.514	1.549	3, 171	0.03	
	10+ years experience	2.438				

Note. df = degrees of freedom; PC represents pair wise comparisons; 1= 0 years experience; 2= 1-4 years experience, 3= 5-9 years experience; 4 = 10+ years experience. *p<0.013

N = 175.

find significant differences between the groups.

4.2.3 Research Question 3

The third and final research question posed was: what are teachers' past and present practices regarding reading assessment for students with EBD?

Ten questions on the survey (i.e., questions 15-24) assessed teachers past and present practices in relation to reading assessment for students with EBD. The questionnaire asked respondents to indicate by a four-point Likert scale how frequently they assess the reading of students with EBD (e.g., never indicated by a 1, to very often, indicated by a 4). Thirty-three percent of respondents reported they almost never assess the reading skills of students with EBD, while 10.9% of the respondents indicated they often/very often assess reading skills. The questionnaire asked respondents to indicate the type of assessment tool (formal, informal, or both) they have used in past and present practices to assess the reading of students with EBD. Of all the participants, 3.4% responded that they used a formal type of assessment, 18.3% responded they used informal assessment tools, and 62.9% responded that they used both formal and informal assessments. When respondents were asked to indicate *who* typically administers the assessment (e.g., classroom teacher, special education teacher, school psychologist, or other), 5.7% indicated the school psychologist, 21.1% indicated the regular classroom teacher, 65.7% indicated the special education teacher, and 1.7% indicated other (i.e., speech and language pathologist).

Analyses of variance (ANOVAs) were used to investigate differences that may exist between and within the means of the groups (i.e., primary school roles, years of experience) on the dependent variables that measured reading practice (i.e., past and

present practice). The independent variables included primary school roles (e.g., classroom teacher, special education teacher, administrator, pre-service teacher, and other), and years of experience (e.g., 0 years, 1-4 years, 5-9 years, and 10+ years). Three questions regarding past and present practices of reading assessment were chosen to be analyzed to answer the research question as they directly asked respondents specific questions about reading assessment practices. The questions included: (1) how frequently do you assess the reading skills (i.e., phonological/phonemic awareness, fluency, comprehension) of students with EBD; (2) what type of assessment tool do you typically use when assessing the reading skills of students with EBD; and (3) in the schools you serve, who typically assesses the reading skills of students with EBD. Due to the increased chance of a Type I error when conducting multiple ANOVAs, the alpha level was set at ($p \leq 0.02$). This restricted alpha was calculated by dividing alpha (i.e., 0.05) by the number of tests run (i.e., 3). Effect size was calculated for all statistically significant results using eta squared ($\eta 2$).

The first independent variable considered was primary school role. The analyses of variance (ANOVAs) revealed statistically significant differences between the primary school roles of participants and their past and present reading assessment practices (see Table 4.6) There were significant differences among primary school role on: (1) how frequently you assess the reading skills of students with EBD [$F (5, 169) = 4.779$, $p=.000$, $\eta 2 = 0.12$]; (2) what type of assessment tool is used to assess the reading of students with EBD [$F, (5, 169) = 5.586$, $p=.000$, $\eta 2 = 0.14$]; and (3) who typically assesses the reading skills of students with EBD [$F (5, 169) = 2.824$, $p=.018$, $\eta 2 = 0.08$]. A medium effect size was calculated for questions one and two relating to reading assessment practices. A

Table 4.6
Analysis of Variance for Past and Present Reading Assessment Practices In relation to students with EBD

Dependent Variable	Primary School Role (IV)	Mean	F Value	df	Effect Size	PC
How frequently reading is assessed	Preservice Teacher	1.333				
	Classroom Teacher	2.345				
	Special Education Teacher	2.769	4.779*	5, 169	0.12	3>4, 2,1,5
	Administrator	1.625				
	Other	1.563				
Assessment tool used	Preservice Teacher	1.667				
	Classroom Teacher	2.443				
	Special Education Teacher	2.654	5.586*	5, 169	0.14	
	Administrator	1.125				
	Other	1.500				
Role of individual who typically assesses	Preservice Teacher	1.667				
	Classroom Teacher	2.611				
	Special Education Teacher	2.692	2.824*	5, 169	0.08	
	Administrator	2.375				
	Other	2.125				

Note. df = degrees of freedom; PC represents pair wise comparisons; 1= Preservice Teacher; 2= Classroom Teacher, 3= Special Education Teacher; 4 = Administrator; 5=Other. *p<.02

N = 169

large effect size was calculated for question 2. These effect sizes indicated the differences among teachers' primary school role and past and present reading assessment practices were important.

Scheffé post hoc analyses were then used to determine the location of the main effect when ANOVA's revealed a statistically significant mean difference. The dependent variable (how frequently EBD students are assessed) revealed a significant mean difference between the groups of special education teachers (N=26, M=2.769) and the category of other (i.e., speech-language pathologists; N=16, M=1.563; p=0.015). Differences were not evident between scores of teachers who classified themselves as pre-service teachers or administrators. Although the ANOVA revealed significant differences for the other two dependent variables regarding perceptions of past and present practice, post hoc analyses of simple comparisons did not find significant differences between the groups.

The second independent variable considered was years of teaching experience. The analyses of variance (ANOVA) revealed a statistically significant difference between the respondents' years of teaching experience (e.g., 0 years, 1-4 years, 5-9 years, and 10+ years) and the dependent variables (e.g., past and present practices; see Table 4.7). There were significant differences among years of teaching experience on the following question: (1) how frequently you assess the reading skills of students with EBD [F (3, 171) = 3.951, p=.009, $\eta 2$ = 0.06]. The ANOVA did not reveal a significant difference between years of teaching experience on either type of assessment tool used or the role of the individual who typically assesses reading skills (i.e., special education teacher, school

Table 4.7
Analysis of Variance for Past and Present Reading Assessment Practices In relation to students with EBD

Dependent Variable	Years of Teaching Experience (IV)	Mean	F Value	df	Effect Size	PC
How frequently reading is assessed	0 years experience	1.200				
	1-4 years experience	2.294				
	5-9 years experience	2.429	3.951*	3, 171	0.06	3>1,2, 4
	10+ years experience	2.302				4>1,3, 2
Assessment tool used	0 years experience	1.400				
	1-4 years experience	2.265				
	5-9 years experience	2.257	.056	3, 171	0.04	
	10+ years experience	2.396				
Role of individual who typically assesses	0 years experience	1.800				
	1-4 years experience	2.647				
	5-9 years experience	2.600	2.813	3, 171	0.05	
	10+ years experience	2.573				

Note. df = degrees of freedom; PC represents pair wise comparisons; 1= 0 years experience; 2=1-4 years experience, 3= 5-9 years experience; 4 = 10+ years experience. *p<.02

N = 175

psychologist). A medium effect size was calculated among teachers' years of experience (independent variable) and the dependent variable, *how frequently do you assess the reading skills of students with EBD.*

Scheffé post hoc analyses were then used to determine the location of the main effect when ANOVA's revealed a statistically significant mean difference. The dependent variable (how frequently EBD students are assessed) revealed a significant mean difference between the groups with: (1) no years of teaching experience (i.e., pre-service teachers) and teachers with 5 to 9 years of experience (p=0.012); and (2) no years of teaching experience and teachers with 10 or more years of experience (p=0.017).

In addition, two open-ended questions were included in the survey to provide insight into teachers' knowledge of reading assessment and their past and present reading assessment practices. The first open-ended question asked: Please list the specific areas of reading that you typically assess for when evaluating the reading of students with EBD? (e.g., comprehension). Approximately 71% (N=125) of the participants responded to the first open-ended question (see Appendix E). Fifty-one participants chose not to respond to this open-ended question. The responses were reviewed and organized into six categories, based on popularity of responses, including: comprehension, fluency, phonics, phonemic awareness, vocabulary, and other (i.e., metacognition, silent reading). The first five of these categories have been outlined and recognized by authors and researchers as the five most pertinent areas of reading instruction (e.g., Armbruster, Lehr, & Osborn, 2001). Any response that was not related to the five categories was labeled as other (i.e., metacognition, silent reading), but still provided valuable insight into the areas related to reading that teachers are assessing. A large percentage of participants (54.4%) reported

comprehension as being an area they assess. Approximately 28.8% indicated fluency, 23.7% indicated phonics, 8.4% reported phonemic awareness, 6.5% reported vocabulary, and 16.3% reported other (i.e., metacognition, silent reading). While some respondents left this question blank, others included comments. For example, respondents commented that they assess the reading of students with EBD "the same as everyone else." Another respondent commented, "I have not evaluated students with EBD that I am aware of."

The second open-ended question asked: "Please list the specific assessment tool(s) you use to assess the reading of students with EBD (e.g., Woodcock Johnson, Diagnostic Reading Assessment, Curriculum Benchmark Assessment). Approximately 61% (N=107) of the participants responded to this open-ended question. Sixty-eight participants chose not to respond to this open-ended question. The responses were reviewed and organized into six categories based on majority of responses, including Woodcock Johnson Reading Mastery, Diagnostic Reading Assessment (DRA), running records, Curriculum Benchmark Assessment (CBM), Alberta Diagnostic, and other (i.e., Brigance, Wide Range Achievement Test, Academy of Reading). Approximately 27% of respondents reported using the Woodcock Johnson Reading Mastery-II, which is a standardized assessment tool. Thirty-five percent indicated they used the DRA, 5.1% reported using running records, 5.6% reported using CBM, 7.4% indicated they used the Alberta Diagnostic, while 19.5% reported other (e.g., metacognition, silent reading). Again, several respondents included comments suggesting that the special education teacher (i.e., resource room or learning assistance teacher) is responsible for administering these assessments to this population of students. Three respondents noted that the special education teacher would administer the Woodcock Johnson and the classroom teacher

would be responsible for the other assessments.

A detailed discussion of the results and possible implications of the study are presented in chapter five.

Chapter 5: Discussion

5.1 Summary

5.1.1 Purpose and Procedures

The purpose of the research project was to explore educators' perceptions of reading assessment for students with emotional and/or behavioural disorders. The following research questions were posed: (1) What are teachers' levels of training regarding reading assessment for students with emotional and behavioural disorders (EBD)? (2) What are teachers' perceptions of competence regarding reading assessment for students with emotional and behavioural disorders (EBD)? and (3) What are teachers' past and present practices (e.g., formal and/or informal reading tests) regarding reading assessment for students with emotional and behavioural disorders (EBD)? The following is a discussion of the study's findings, limitations, and possible implications for practice and future research.

5.2 Findings

1. Special education teachers reported they had more educational training (university and professional development) in the area of assessment and intervention of reading difficulties than regular classroom teachers: $F (5, 169) = 3.573$, $p=0.004$, $\eta 2= 0.10$);
2. Educators reported limited educational training in undergraduate university courses related to reading instruction and reading assessment for specialized populations, such as students with EBD (e.g., 77% reported zero courses on reading instruction, and 80% reported zero courses on reading assessment);
3. Educators reported it would have been beneficial if their educational training program devoted more time to the area of reading assessment for students with emotional and behavioural disorders: $F (5, 169) = 2.859$, $p=.017$, $\eta 2= 0.08$);
4. Educators rated their quality of training (e.g., university and professional development) poorly in the area of reading assessment: $F (5, 169) = 2.900$, $p=.015$, $\eta 2= 0.08$);

5. Special education teachers reported a higher rating of expertise in interventions for reading problems then regular classroom teachers for typically achieving students: F (5, 169) = 4.397, p=.001, $\eta 2$=0.12
6. Educators with ten or more years of teaching experience reported a higher rating of expertise in interventions for reading problems than teachers with no years of experience for students with EBD: F (3, 171) = 4.199, p=.007, $\eta 2$=0.07);
7. Educators do not feel confident in providing reading interventions for students with EBD: F (3, 171) = 4.100, p=.008, $\eta 2$=0.07);
8. Special education teachers reported they more frequently assess the reading skills of students with EBD than educators whose roles are listed as *other* (i.e., SLP, school psychologist): F (5, 169) = 4.779, p=.000, $\eta 2$=0.12);
9. Educators with 5 to 9 years of teaching experience reported they more frequently assess the reading skills of students with EBD than educators with no years of teaching experience: educators with 10 or more years of teaching experience also reported they more frequently asses the reading skills of students with EBD than educators with no years of teaching experience (F (3, 171) = 3.951, p=0.02, $\eta 2$=0.06)

5.2.1 Research Question 1

The first research question posed was: What are teachers' levels of training regarding reading assessment for students with emotional and behavioural disorders (EBD)?

Three questions directly related to training were chosen to be analyzed to answer the first research question. The first survey question chosen was: "Indicate the amount of time your educational training program devoted to assessment and intervention of reading difficulties." Analyses of variance (ANOVAs) were used to examine where differences existed between and within the means of the groups (e.g., classroom teacher, special education teacher) on the dependent variables that measured perceptions of training (e.g.,

amount of educational training). There were significant differences and a medium effect size among primary school role and the amount of educational training respondents reported receiving in the area of assessment and intervention of reading difficulties [F (5, 169) = 3.573, p = .004, $\eta 2$ = 0.10]. Scheffé post hoc analyses revealed a significant mean difference between the primary school roles of classroom teacher (N=113, M= 2.239) and special education teacher (N =26, M=2.923; p= 0.012). That is, special education teachers reported they had more educational training in the area of assessment and intervention of reading difficulties than regular classroom teachers. This finding is not surprising since teachers wanting to work in the province of Saskatchewan as special education teachers, must take additional coursework in the area of special education (i.e., across the areas of communication, behaviour, and assessment; Saskatchewan Ministry of Education, 2008). Although special education teachers are required to obtain more education training (e.g., post-degree courses) than classroom teachers, this additional coursework may not include the area of reading instruction and/or assessment. Special education teachers perhaps provide the most support to students in the area of literacy. Therefore, they may seek professional development in the area of assessment and intervention to help them enhance their skills in this area, whereas classroom teachers may be more concerned with training courses on classroom management or instructional strategies. While it is important for special education teachers to have an advanced understanding of assessment and intervention of learning difficulties, it is also important for classroom teachers to receive appropriate training in assessment and intervention particularly in the area of reading difficulties. Classroom teachers are professionals who are ultimately responsible for administering assessments and providing instruction within the classroom.

If they do not have a basic understanding of the reading process and its underlying support systems (i.e., language; Mather et al., 2001), obtained through formal training, students who are experiencing reading difficulties will be at a disadvantage.

Respondents were also asked to recall the approximate number of training courses they completed that were devoted to reading instruction and assessment. Approximately one third of the participants (28%) reported they had not taken any undergraduate university courses on reading instruction, and less than one-half (43%) reported the same for reading assessment. The majority of the participants (approximately 88%) reported they had not taken any professional development courses on reading instruction and/or reading assessment. Teachers in this study reported they had received very little training (i.e., university courses and professional development) in the areas of reading instruction and reading assessment in general (e.g., for all populations of students). These findings are similar to the findings of Nelson and Machek (2007) and Fish and Margolis (1988), in that the participants (i.e., school psychologists) reported they were required to take only one or fewer courses on reading. This finding was rather surprising since the majority of respondents hailed from an area in Western Canada where it is a requirement to take an undergraduate course in reading to obtain a teaching degree. One possible reason for this may be because respondents were not able to accurately recall their training (e.g., they may have taken the course, but do not recall taking it). Another possible reason may be that teachers may have been enrolled in a secondary program in education (e.g., training to teach high school students) where it is unlikely that they would be required to take a reading course. Reading is considered to be one of the most important areas in education (Vaughn, Bos, & Schumm, 2007), therefore it seems apparent that ample time would be

spent on training teachers in this important area. In fact, so much time should be spent on this area that the chance for teachers not being able to recall such a course, would be minimal. This is especially true for teachers teaching in the primary grades. If children are not receiving quality instruction in reading in these pertinent years of development, this could have detrimental outcomes on their achievement. Snow et al. (1998) declared that students who read poorly in the first and second grades will likely struggle in reading throughout their entire school experience. In addition, researchers have suggested that early reading intervention strategies (e.g., in phonological awareness, phonics) improve reading skills and are likely to increase the future reading success of struggling readers (e.g., Bos et al., 2001; Snow et al., 1998). Therefore, if teachers were trained at the secondary level and then for various reasons (e.g., difficulty finding employment in teaching area) they accept a job at the primary level, it is very likely that these teachers have had no training or experience in the area of reading instruction. This can have an unfavorable effect on the learning outcomes of students in this classroom. It was somewhat distressing to learn that almost half of respondents (43%) reported they had never taken an undergraduate course on reading assessment. This raises concern. If teachers are not receiving training related to reading instruction and reading assessment for general populations, it seems safe to assert that they are not receiving necessary training for special populations (i.e., students with emotional and behavioural disorders).

The second question used to elicit information regarding teacher training was: "It would have been beneficial if my educational training program devoted more time to the area of reading assessment for students with EBD." There were significant differences and a medium effect size among primary school role and teachers' importance ratings of

educational training in the area of reading assessment and intervention for students with EBD [F (5, 169) = 2.859, p = .017, $\eta 2$ = 0.08]. Although the analyses of variance (ANOVA) reported a statistical significance between the means of these groups, Scheffé post hoc analyses of simple comparisons could not determine the location of the main effect. That is, teachers reported that it would have been beneficial if they had received additional training in the area of reading assessment for students with EBD, however it was not known which specific group of teachers (i.e., pre-service teachers, special education teachers, regular classroom teachers, or administrators) rated educational training in this area as important in comparison to other groups. It is likely some combination of these groups produced the statistically significant difference that was found (i.e., pre-service teachers, special education teachers, regular classroom teachers, or administrators), and this cannot be determined using simple comparisons. Over half of the respondents reported they had not taken any undergraduate courses on reading instruction (77.7%), and reading assessment (80%) relating to students with EBD. The findings were even more dismal when respondents were asked about courses at the graduate level. Approximately 86.9% had not taken any coursework in both reading instruction and reading assessment for typically achieving students, and 92.6% had not taken any coursework in reading instruction and assessment for students with EBD. This suggests that teachers are graduating with masters and doctorate degrees in the area of education with minimal educational training in reading intervention and reading assessment. Aaron (1995) observed a similar finding with school psychologists enrolled in graduate programs, where school psychologists were completing their graduate studies and had never taken a reading course. This finding was not congruent with Maag and

Katsiyannis' (1999) findings. Results from their study indicated that the majority of teacher training regarding students with EBD occurred at the graduate level. Kauffman and Hallahan (1993) supported this idea, suggesting that due to the profound challenges displayed by students with EBD, teachers require several years of teaching experience before they receive explicit training in this area, which occurs at graduate level studies. One possible explanation for these findings is that respondents who were graduate students were in programs that did not provide coursework and/or training in reading instruction and intervention (e.g., educational administration). Respondents were also asked to report the training they received devoted to behaviour management strategies for students with EBD. This question was included to gain insight into what types of training teachers are receiving to instruct students with EBD (e.g., is the focus on academic content or on behaviour management?). Knitzer et al, 1990 reported that often children with EBD are exposed to a curriculum of behaviour management techniques and the teaching of academic content is absent. When respondents were asked about undergraduate behaviour management courses, 29.1% reported they had taken one class devoted to behaviour management skills. Although this percentage may be considered low, it is considerably higher than the percentages of respondents who reported taking one class devoted to reading instruction (17.1%) and reading assessment (15.4%) for students with EBD. This finding is supportive of the fallacy that behaviour management skills are the most critical area for instruction students with EBD and often become the focus of the curriculum, rather than academic content (Knitzer et al., 1990). Hence, students with EBD experience less exposure to academic content (i.e., reading instruction) and continue to fall further behind their typically achieving peers (Kauffman,

1997). Regardless of which group reported a higher or lower rating for this question, teachers reported that they would benefit from additional training in reading assessment for students with EBD. Approximately 32.6% of respondents agreed that it would have been beneficial if their training program devoted more time to reading assessment for students with EBD. Slightly more than half of respondents (50.9%) reported that they *very much agree* that this training would have been beneficial. In Nelson and Machek's study (2007) over 80% of the school psychologists reported the need for more training in the area of reading assessment and intervention. Students with EBD are prevalent in today's classrooms. Especially with the increasing push for inclusion and inclusive classrooms, teachers are faced with a diverse group of readers in their classrooms. An alarming 80% of respondents reported they had not received a reading assessment course for students with EBD. Students with EBD demonstrate significant reading deficits in comparison to their typically achieving peers (Vaughn, Levy, Coleman, & Bos, 2002). Therefore, the need for further training and interventions in reading is apparent for this population of students. Yet, these findings suggest this type of training is not being provided and/or taken by educators. A lack of training in the area of reading assessment and intervention could have a detrimental impact on these students' education (i.e., lack of understanding and ability to meet the varied learning needs of students with EBD). It appears teachers in this study (specialized or not) are ill prepared to meet the many demands (e.g., academic and behavioural) of teaching and working with students with EBD.

The third and final question used to elicit information regarding teacher training was: "How would you rate the quality of training you received with respect to reading

assessment strategies?" There were significant differences and a medium effect size among primary school role and teachers' ratings of the quality of training they received relating to reading assessment strategies [$F (5, 169) = 2.900$, $p = .015$, $\eta 2 = 0.08$]. Although the analyses of variance (ANOVA) reported a statistical significance between the means of these groups, Scheffé post hoc analyses of simple comparisons again did not find significant differences between the groups (i.e., pre-service teachers, special education teachers, regular classroom teachers, or administrators). That is, teachers rated the quality of their training in reading assessment strategies but it was not known which specific group of teachers (i.e., pre-service teachers, special education teachers, regular classroom teachers, or administrators) rated their training in this area as better or worse in comparison to the other groups. This question was posed in relation to typically achieving students. Previous studies have found that teachers who have more training substantially outperform those with less training in planning, knowledge, preparation, classroom environment and instruction (e.g., Mather et al., 2001; Nougaret et al., 2005; Sutherland et al., 2005). Approximately 43% of respondents reported taking 0 courses in the area of reading assessment for typically achieving students. If almost half of respondents are reporting they did not receive any courses in reading assessment, it seems probable to state that these same respondents would therefore have a poor quality of training in this area. This is an alarming finding. Smith (2004) stated that reading is one of the most frequently measured abilities. When teachers assess the reading skills of their students, the data derived from this assessment assists them in making informed decisions regarding instruction. Currently, many school districts are implementing new literacy initiatives to improve student outcomes in the area of reading, however, educators in this

study are reporting minimal educational training in reading assessment. Reading assessment informs instruction, therefore if teachers are not able to assess reading skills, it is likely they also are not able deliver appropriate reading instruction. In the college of education at the University of Saskatchewan, it is a requirement that pre-service teachers take at least one reading course in their undergraduate training. If teachers are describing their training in reading assessment strategies as poor in quality for typically achieving students, it seems safe to assert it would be similar or worse for specialized populations, such as students with EBD. There have been limited studies that examine reading assessment for specialized populations. Although the response was very low for pre-service teachers (3%), their responses perhaps provide the most accurate reflection on quality of training, as their training was most recent and therefore easiest to recall. As seen in the work of Bos et al. (2001, Levy and Vaughn (2002), and Moats and Foorman (2003), this group of pre-service teachers seemed to be indicating that they are not receiving quality training in the area of reading assessment and intervention.

5.2.2 Research Question 2

The second research question posed was: What are teachers' perceptions of competence regarding reading assessment for students with emotional and behavioural disorders (EBD)?

Four questions were chosen to be analyzed to answer the second research question. The first question chosen was "How would you rate your expertise in the area of reading interventions?" There were significant differences and a medium effect size among primary school role and the teachers' ratings of expertise in the area of reading intervention [$F (5, 169) = 4.397$, $p = .001$, $\eta 2 = 0.12$]. Scheffé post hoc analyses revealed

a significant mean difference between the primary school roles of classroom teacher (N=113, M=2.416) and special education teacher (N=26, M=3.039). That is, special education teachers had higher expertise ratings in the area of reading interventions than regular classroom teachers. Since special education teachers reported that they received more training in assessment and intervention than the other groups (i.e., classroom teachers, administrators) it was not surprising that they reported a higher level of expertise in the area of reading interventions than regular classroom teachers. Another possible reason for this finding may be that special education teachers have more exposure and experience with reading interventions than regular classroom teachers, as a large percentage of students receiving special education services require support in reading. Eighty percent of students receiving special education services have a reading disability (Lerner, 1989). Therefore, special education teachers may seek resources or professional development training regarding reading interventions to support them in teaching reading since a large portion of the children they work with experience reading difficulties. Again, although it is important that special education teachers have this expertise it is also important for classroom teachers to report a high level of expertise as they are responsible for the majority of reading instruction and intervention. Special education teachers may only work with a student for a few hours per week, whereas the Saskatchewan curriculum requires classroom teachers to devote approximately five hundred and sixty minutes per week (approximately one hundred and ten minutes per day), to language arts instruction, which includes reading instruction. Therefore, it is important that classroom teachers receive high-quality training at the pre-service and in-service level in order to obtain a higher level of expertise in reading interventions.

Through formal and informal training, both special education teachers and classroom teachers can increase their knowledge and expertise in order to provide systematic instruction that will assist struggling readers (Bos et al., 2001).

Teachers' ratings of expertise in the area of reading intervention were also analyzed in relation to respondents' years of teaching experience. Significant differences and a medium effect size were found among years of experience and teachers' ratings of expertise in the area of reading intervention [$F(3, 171) = 3.921$, p=.010, $\eta 2 = 0.06$]. Although the analyses of variance (ANOVA) reported a statistical significance between the means of these groups, Scheffé post hoc analyses of simple comparisons again did not find significant differences between the groups (i.e., 0 years of teaching experience, 1-4 years of teaching experience, 5-9 years of teaching experience, 10+ years of teaching experience). That is, teachers rated their level of expertise in reading interventions but it was not known which specific group of teachers (i.e., 0 years of teaching experience, 1-4 years of teaching experience, 5-9 years of teaching experience, 10+ years of teaching experience) rated their level of expertise in this area as better or worse in comparison to the other groups. Less than one-half of participants (44%) reported a moderate level, and 42.5% reported a moderately low level of expertise in interventions for reading problems for typically achieving students. A small percentage of respondents (6.3%) reported a high level of expertise in reading interventions for reading problems. A major conclusion throughout the research suggested that teachers must possess sufficient knowledge of the language structure and specific components of reading (e.g., phonological awareness, phonics) in order to teach reading (e.g., Bos et al., 2001; Mather et al., 2001; Moats, 2003). Moats (2003) suggested that mastery in language is as essential for a literacy

teacher as anatomy is for a physician. She makes a valid and powerful statement. One would expect and trust their physician encompass a certain level of expertise, often derived from formal and informal training. Yet, this finding suggests children are being taught a core component (e.g., reading), which has great implications on their future, by teachers who are reporting low levels of expertise. In similar research considering teacher training and expertise related to reading instruction researchers found that although in-service teachers were more knowledgeable than pre-service teachers of the structure of language, both were deemed inadequately prepared to deliver effective reading instruction and intervention (Mather et al., 2001). Bos et al. (2001) found that although teachers with ten or more years of experience demonstrated greater knowledge and expertise regarding the language structure than teachers with one to five years of experience, both groups produced low scores. Therefore, regardless of which group of participants rated their level of expertise differently than the other groups, it is likely that all of the groups could improve their expertise in the area of reading intervention.

The second question regarding perceptions of competence was: "How would you rate your expertise in reading interventions for students with EBD?" There were significant differences and a medium effect size among primary school role and teachers' ratings of expertise in reading interventions for students with EBD [$F(5, 169) = 3.252$, $p = .008$, $\eta 2 = 0.09$]. Although the analyses of variance (ANOVA) reported a statistical significance between the means of these groups, Scheffé post hoc analyses of simple comparisons could not determine the location of the main effect. That is, teachers rated their levels of expertise in reading interventions for students with EBD, however it was not known which specific group of teachers (i.e., pre-service teachers, special education teachers,

regular classroom teachers, or administrators) rated their expertise as better or worse than other groups (i.e., other). Frequency distributions revealed much more dismal findings for respondents' ratings of expertise in interventions for students with EBD, than for typically achieving students. For example, 25.7% reported a low level of expertise, 46.3% reported a moderately low level, 23.4% reported a moderate level, and 1.7% reported a high level. Teachers require support and training in how to deliver reading interventions to diverse populations, such as students with EBD. Teachers may feel they have a moderate level of expertise in delivering reading instruction and interventions to typically achieving students. However, students with EBD may be working 2-3 grade levels below curriculum reading expectations. Teachers may not have the same level of expertise working with struggling readers as opposed to typically achieving readers. A wealth of literature suggests that teachers are lacking the training and expertise to effectively teach students with EBD (e.g., Cook et al, 2003; Maag & Katsiyannis, 1999; Mock & Kauffman, 2002). In addition, it is reported that the focus of the curriculum is based on behaviour intervention strategies rather than academic content. Begeny and Martens (2006) reported that teachers lack the training and preparation in both of these areas. Teachers from various roles in schools (e.g., classroom teacher, special education teacher) are reporting inadequate training in the area of reading not only for specialized populations, but also even for typically achieving students. This again suggests the pressing need for additional training in the area of reading interventions and reading assessment for specialized populations to help alleviate the dismal reading outcomes for students with EBD.

Teachers' ratings of expertise in the area of reading intervention for students with

EBD were also analyzed in relation to respondents' years of teaching experience. Significant differences and a medium effect size were found among years of experience and teachers' ratings of expertise in the area of reading intervention for students with EBD [F (3, 171) = 4.199, p=.007, $\eta 2 = 0.07$]. Scheffé post hoc analyses revealed a significant mean difference between teachers with no years of experience (N=10, M=1.200) and teachers with ten or more years of experience (N=96, M=2.094). That is, teachers with ten or more years of experience had higher level of expertise ratings in the area of reading interventions for students with EBD than teachers with no teaching experience (i.e., pre-service teachers). Again, this finding is not surprising as teachers who have been teaching for ten or more years would have gained much more experience, practice, and exposure to reading interventions than teachers with little to no teaching experience, therefore feeling more knowledgeable to report a higher level of expertise. Researchers have emphasized that struggling readers (e.g., students with EBD) require systematic explicit instruction in order to experience success in reading (e.g., Mather et al., 2001; Nelson, 2000; Vaughn et al., 2002). In a study conducted by Mather et al. (2001), the researchers found that teachers with more years of experience generally have more positive perceptions of explicit instruction in reading interventions. The results of this current research confirmed their findings. It would be interesting to examine if those teachers who rated their expertise level higher was due to feeling more competent in dealing with behaviour, or academic content (e.g., reading intervention). For example, a teacher with several years of experience in a behaviour modification program may report a high level of expertise based on the exposure and experience with behaviour difficulties. Teachers with ten or more years of experience would likely have more

experience and exposure to both dealing with behaviour problems and implementing reading intervention strategies, thus may likely report a higher level of expertise for one or both of these areas.

The third question asked regarding teacher competence was: In regards to teaching students with EBD, how confident do you feel in the area of reading intervention?" Analysis of variance (ANOVA) did not report a statistical significance between primary school roles on respondent's levels of confidence. Teachers' ratings of confidence in the area of reading interventions for students with EBD were also analyzed in relation to respondents' years of teaching experience. There were significant differences and a medium effect size among years of teaching experience and teachers' ratings of confidence in reading interventions for students with EBD [$F (3, 171) = 4.100$, $p = .008$, $\eta 2 = 0.07$]. Although the analyses of variance (ANOVA) reported a statistical significance between the means of these groups, Scheffé post hoc analyses of simple comparisons could not determine the location of the main effect. That is, teachers rated their levels of confidence in reading interventions for students with EBD, however it was not known which specific group of teachers (i.e., 10+ years of experience, 4-9 years of experience) rated their confidence as better or worse than other groups (i.e., 0 years of experience). When respondents were asked about how confident they felt in relation to students with EBD, the majority of the participants reported a low level of confidence level in reading intervention (49.1%). Only six participants reported that they were very confident in reading intervention. This suggests that teachers are not feeling confident in providing reading interventions for students with EBD. One possible reason is that students with EBD generally perform poorly in the area of reading (Rivera et al., 2006;

Vaughn et al., 2002). Therefore, teachers may have more negative perceptions of their abilities due to the reading outcomes of students with EBD when compared to typically achieving students. Teachers' perceptions regarding content knowledge and perceptions of competence have a profound effect on student outcomes (Bos et al., 2001). If teachers feel confident in their knowledge and abilities they are more likely to improve student learning. Cunningham, Perry, Stanovich, and Stanovich (2004) suggested a link exist between teacher knowledge and effective reading instruction. Therefore, it is imperative that teachers receive adequate training to increase their knowledge base and confidence levels in reading, especially for populations such as students with EBD that experience more reading deficits than the general population. Regardless of years of which group of participants rated their level of confidence differently than the other groups, it is likely that all of the groups could improve their confidence in the area of reading intervention for students with EBD. In order to increase teachers' levels of confidence high-quality preparation programs at the pre-service and in-service levels must be evident.

The fourth and last question to elicit information regarding teachers' perceptions of competence was: "In regards to teaching students with EBD, how confident do you feel in the area of reading assessment?" There were significant differences and a medium effect size among primary school role and teachers' ratings of confidence in the area of reading assessment [$F(5, 169) = 3.397$, $p = .006$, $\eta 2 = 0.09$]. Although the analyses of variance (ANOVA) reported a statistical significance between the means of these groups, Scheffé post hoc analyses of simple comparisons again could not determine the location of the main effect. That is, teachers rated their confidence levels in regards to reading assessment for students with EBD, but it was not known which specific group of teachers

(i.e., pre-service teachers, special education teachers, regular classroom teachers, or administrators) rated their confidence levels higher or lower in comparison to the other groups. When respondents were asked about how confident they felt in relation to students with EBD, the majority of the participants reported a low level of confidence level in assessment (40.6%). Only 12 respondents were very confident in reading assessment. These findings were not surprising. It seems obvious that due to the lack of quality training teachers have reported in this study, that they would lack confidence in this area. Literature regarding reading assessment for specialized populations is scarce. Teachers must become informed on how to appropriately assess the reading skills of specialized populations, such as students with EBD. Understanding types of assessment tools, (e.g., formal vs. informal), and how to interpret them needs to be part of pre-service and in-service training. Although the assessment tool itself does not change from child to child the manner in which the assessment is carried out may look different for a child with EBD. For example, an accommodation for an informal reading assessment tool may be that the child lay on the floor to read a story, or freedom to move or stand. An accommodation on a formal test may include additional breaks or time to complete the test. There is a proliferation of research that examined the underachievement of students with EBD in the area of reading. Since reading instruction and reading assessment are reciprocal of one another therefore, teachers must be proficient in reading assessment strategies in order to deliver effective reading instruction. Classroom teachers and special education teachers are directly responsible for teaching children with EBD how to read, yet these results suggest they are not confident in this area. This can once again have a negative impact on students' reading outcomes.

5.2.3 Research Question 3

The third research question posed was: What are teachers' past and present practices regarding reading assessment for students with emotional and behavioural disorders (EBD)?

Three questions directly relating to past and present reading assessment practices were chose to be analyzed to answer the third research question. The first survey question chosen was: "How frequently do you assess the reading skills (i.e. phonological/phonemic awareness, fluency, comprehension) of students with EBD? There were significant differences and a medium effect size among primary school role and how frequently teachers reported assessing the reading skills of students with EBD [$F(5, 169) = 4.779$, $p = .000$, $\eta 2 = 0.12$]. Scheffé post hoc analyses revealed a significant mean difference between the primary school roles of individuals who reported their roles as *other* (N=16, M= 1.563) and special education teacher (N =26, M=2.769). That is, special education teachers reported they had assessed the reading skills of students with EBD more frequently than individuals who reported their roles as *other* (N=16, M= 1.563). This finding is not surprising, as individuals that reported their role as other (e.g., SLP, teacher librarian) may generally never administer a reading assessment, as it is not part of their role or job description. Thirty-three percent of respondents reported that they almost never assess the reading skills of students with EBD. One possible reason for this is because teachers may feel that they must get the behaviours under control before they can begin to think about academic instruction. That is, behaviour becomes the priority rather than academics, such as reading development. Only 10% of respondents reported that they assess the reading skills of students with EBD very often. Again, this finding is suggesting the urgent need for additional training in this area. It would have been

beneficial to pose this question in relation to typically achieving students as well, to determine if teachers were assessing students with EBD less frequently or more frequently than typically achieving students. This would have been useful information since the literature suggested that much for the focus for students with EBD is centered on behaviour management techniques and social skills interventions, rather than academic needs such as reading (e.g., Bos & Coleman, 2002; Montague et al., 2005).

Teachers' ratings of how frequently they assess the reading skills of students with EBD was also analyzed in relation to respondents' years of teaching experience. Significant differences and a medium effect size were found among years of experience how often teachers assessed the reading skills of students with EBD [$F(3, 171) = 3.951$, p=009, $\eta 2 = 0.06$]. Scheffé post hoc analyses revealed a significant mean difference between teachers with no years of experience (N=10, M=1.200) and teachers with ten or more years of experience (N=96, M=2.302). Scheffe post hoc analyses also revealed a significant mean difference between teachers with no years of experience (N=10, M=1.200) and teacher with five to nine years of teaching experience (N=35, M=2.429). That is, teachers with ten or more years of experience, and teachers with five to 9 years of experience assessed the reading skills of students with EBD more frequently than teachers with no years of experience. One likely reason for this is that teachers with more teaching experience have had more exposure and opportunity in their classrooms to carry out reading assessments. Teachers with no years of teaching experience (e.g., pre-service) would be provided with little opportunity to do so, unless during their practicum. Therefore, it is not surprising that teachers with five or more years of teaching experience would assess reading skills more frequently than teachers with 0 years of experience.

Teachers with more teaching experience generally demonstrate a greater understanding of the language structure and components of reading (Bos et al., 2001). Therefore, they may have a better understanding of what reading areas students would need to be assessed in (e.g., fluency, comprehension) than teachers with minimal years of teaching experience. In addition, teachers who are just starting out teaching may feel overwhelmed with their new role and the extensive responsibilities that go with it. Therefore, new teachers may be planning and preparing on a day-to-day basis, and assessment is not a priority for them. In addition, once again, the focus or primary concern for new teachers is the behaviour rather than academics. For example, in a qualitative study by Coleman and Vaughn (2000) one teacher explained that she was still trying to figure out how to teach her students with EBD, and could not even think about assessing them. Therefore, the assessment may be left to the special education teacher or perhaps these children are not assessed at all. This question was posed to determine whether or not students with EBD are in fact being assessed. The important part of reading assessment is what teachers are doing with the data they receive from the assessment.

The second question used to elicit information regarding past and present reading assessment practices was: "What type of assessment tool do you typically use when assessing the reading skills of students with EBD?" Participants were to check one of three choices which included formal assessment (indicated by a value of 1), informal assessment (indicated by a value of 2), or both (indicated by a value of 3). There were significant differences and a large effect size among primary school role and the type of assessment tool typically used to assess the reading skills of students with EBD [$F(5, 169) = 5.586$, $p = .000$, $\eta 2 = 0.14$]. Although the analyses of variance (ANOVA) reported

a statistical significance between the means of these groups, Scheffé post hoc analyses of simple comparisons again could not determine the location of the main effect. The effect size reported was large which tell us that although we do know which groups reported what, there is a noticeable difference in responses. Over half of the respondents (62.9%) reported that they use both formal and informal reading assessments for students with EBD. Many researchers have reported that using both types (i.e., formal, informal) for typically achieving students is optimal (e.g., Farr & Trumbell, 1997; Johnston, 2003; Valencia, 1997). Daily instruction is modified and adapted to meet individual needs, therefore assessment should be viewed as the same (Farr & Trumbell, 1997). It must look different, include a variety of tools, occur in various settings, and be dependent on the diversity of students being served (Farr & Trumbell, 1997). A very small percentage (3.4%) reported using formal assessments for students with EBD. This finding is conducive to literature suggesting that formal assessment alone is not ideal for students with EBD and if implemented, appropriate accommodations should be provided (Taylor, 2006). In addition, formal assessments can be a *trigger* for students with EBD. For example, fear of failure has been ingrained in these students' minds, and therefore they will often refuse to participate or display overt or aggressive behaviours (Coleman & Vaughn, 2000). Many researchers believe that formal reading assessments are not a true measure of a child's reading abilities. They measure isolated sub-skills rather than occur in the natural context of real reading (e.g., Hammill, 1987; Taylor, 1999; Wason-Ellam, 1994). Thurlow et al. (2000) emphasized the importance of specific testing accommodations in a child's Individualized Education Plan (IEP) for standardized testing. However, not all students with EBD will have an Individualized Education Plan

and could really benefit from accommodations as well (e.g., additional time, allow movement to walk around, breaks). It is important that teachers use informal assessments for struggling readers. Approximately 18.3% reported using informal reading assessments for students with EBD. Informal assessments focus on what a child *can* do rather than what they *can't* do. Perhaps the most noted disadvantage to informal assessments is that they are time-consuming (Hallahan & Kauffman, 2003). These assessments require extra time to prepare, administer, and note observations (Paris & Carpenter, 2005). However, they are perhaps the best tools to implement with children with EBD. Experienced teachers who are familiar with the elements of reading can easily identify students with reading difficulties through informal testing (Wiederholt & Bryant, 1987). Therefore, it is essential that classroom teachers receive training in the area of reading assessment for both typically achieving students and students with EBD.

The third question chosen posed in relation to past and present reading assessment practices was: "In the schools you serve, who typically assesses the reading skills of students with EBD?" Participants were to check one of the three choices which included school psychologist (reported by a value of 1), regular education teacher (reported by a value of 2), special education teacher (reported by a value of 3), or other (reported by a value of 4). Significant differences and a medium effect size were found among primary school role and teachers' responses to who typically assessing the reading skills of students with EBD [$F(5, 169) = 2.824$, $p = .018$, $\eta 2 = 0.08$]. Although the analyses of variance (ANOVA) reported a statistical significance between the means of these groups, Scheffé post hoc analyses of simple comparisons again could not determine the location of the main effect. That is, teachers reported whom they felt was responsible for assessing

the reading skills of students with EBD, but it is unknown which groups (e.g., pre-service, classroom teachers) reported it was the responsibility of the other groups (e.g., special education teacher, administrator). These findings could have informed us if classroom teachers are implementing reading assessment to this specialized population or if perhaps they believe it is the role of someone else (e.g., special education teacher, school psychologist). Teachers with additional training in reading assessment (e.g., special education teachers) have reported higher levels of expertise and confidence in delivering reading instruction and reading assessment, which has been linked to better student outcomes. Despite roles in the schools or years of experience teachers require training to be effective in this area. Although the special education teacher is responsible for some administering and interpreting some assessments, it is ultimately the responsibility of the classroom teacher to assess, report and monitor progress.

5.2.4 Open Ended Questions. The first open-ended question in relation to past and present reading assessment practices was: "Please list the specific areas of reading that you typically assess for when evaluating the reading of students with EBD? (e.g., comprehension). Several researchers have noted five pertinent areas of reading that teachers must assess for. These areas included comprehension, fluency, phonics, phonemic awareness, and vocabulary (e.g., Armbruster et al., 2001, Torgesen, 2002). Therefore, categories were based on these five areas in addition to the category listed as *other* for areas that were not identified by these researchers, however still considered valuable. The most common response was comprehension. That is, over one-half of respondents (66.9%) identified comprehension as an area they assess for students with EBD. Approximately 35.4% of respondents reported fluency as an area they assess for

students with EBD, 29.1% reported decoding or word attack skills, 10.3% indicated phonemic and/or phonological awareness, 8% indicated vocabulary, and 20% reported other areas such as, metacognition, and silent reading. It would have been interesting if respondents included their own definition of each of these areas of reading, as these terms may be interpreted differently from person to person based on background experience and knowledge. For example, some teachers may believe that comprehension is something that occurs *after* reading (e.g., a series of questions pertaining to a particular story). Whereas, others may interpret comprehension as a process that begins before reading and occurs throughout. The meanings of these terms likely vary from teacher to teacher. If teachers could receive further training (e.g., professional development) within their school or school divisions regarding this area, their interpretations of these critical components of reading would be more consistent for students.

Fifty-one participants chose not to respond to this open-ended question. This may be because respondents may have felt an open-ended question may be more time consuming and opted not to complete it. Respondents may have also felt pressured or intimated by this type of question as it somewhat tested their knowledge base by asking them to indicate specific areas. Several respondents included additional comments in this section such as, they assess the same areas that they would for the general population (e.g., "the same as everyone else"). Another respondent commented, "I have not evaluated students with EBD that I am aware of." Another respondent stated, "I don't specifically evaluate the reading of EBD students. As a class, I test comprehension and reading level." Several respondents indicated that they did not assess the reading

skills of students with EBD, that the special education teacher did this.

It is interesting to note that only one respondent out of the 124 respondents who chose to answer this question included all five of the reading areas listed by the researchers as important areas to assess (e.g., Arbruster et al., 2001; Torgesen, 2002). This finding suggests that teachers may be uncertain of which components of reading are essential to the development and improvement of reading skills. It is imperative that teachers have a sound understanding of the language structure and components of reading to effectively instruct struggling readers (Mather et al., 2001). This finding is synonymous with the literature. Regardless of years of teaching experience, both pre-service and in-service teachers are inadequately prepared to deliver early literacy instruction (Mather et al., 2001). "Major efforts must be undertaken to ensure that colleges of education develop preparation programs to foster the necessary content and pedagogical expertise at both pre-service and in-service levels" (Lyon, 1999, p. 8).

Caution must be taken when analyzing participants' responses to this open-ended question. Several of the reading areas (e.g., comprehension) were provided as examples throughout the survey. For example, the instructions for this open-ended question provided comprehension as an example of an area teachers can assess. As well, question 16 on the survey asked participants to indicate how frequently they assess students with EBD and provided phonological/phonemic awareness, fluency, and again comprehension as examples. Therefore, respondents may have just included these areas to please the researcher and may not have included them if they had not been mentioned as examples. These findings regarding current and past reading assessment practices, further reiterate the pressing need for further training regarding reading interventions

and assessment for all populations of students.

The second open-ended question relating to reading assessment practices for students with EBD asked: "Please list the specific assessment tool(s) you use to assess the reading of students with EBD?" (e.g., Woodcock Johnson, DRA, CBM). Responses were reviewed and organized into six categories based on the frequency of responses, including: Woodcock Johnson Reading Mastery (WJRM), Diagnostic Reading Assessment (DRA), Curriculum Based Measurement (CMS), running records, Alberta Diagnostic, and other (i.e., Brigance, Wide Range Achievement Test). Fewer respondents answered this open-ended question than the previous one (N=102). Seventy-three participants chose not to answer this question. The most frequent response was the Diagnostic Reading Assessment tool (DRA). Less than one-half of respondents (42.9%) reported using the DRA as one tool they have used or use to assess the reading skills of students with EBD. The second most common assessment tool was the Woodcock Johnson Reading Mastery (WJRM; 32.4%). Although this tool was a common response from participants, Taylor (1999) suggested that the isolated sub-skill tests found in this tool are not an accurate measure of a child's reading skills. This formal assessment tool requires training in administration and is generally administered by special education teachers. Descriptive analyses revealed that 15% of the respondents who completed the survey were special education teachers. Therefore, it is likely that respondents may have included the WJRM as it was provided as an example in the question. Again, caution must be exercised when analyzing this data as three of the most frequent responses (i.e.,WJRM, DRA, CBM) were used as example tools in the question. That is, respondents may have included these three assessment tools because

they were provided and not because they use them. The remaining three assessment tools yielded low percentages of usage, including 6.3% reported running records, 6.9% reported benchmark assessment (CBM), 9.1% reported Alberta Diagnostic, and 24% indicated other (i.e., Brigance, Academy of Reading). The Diagnostic Reading Assessment (DRA by Pearson Learning Group) requires teachers to take a running record for the purpose of this assessment. It is interesting to note that although 26.5% indicated using the informal assessment tool, only 5.1% reported running records as a method of assessment. Although the literature was minimal in regards to reading assessment for students with EBD, Coleman and Vaughn (2000) reported that informal assessments were a more effective means of reading assessment for students with EBD. Informal assessments, such as miscue analyses, focus on how children are reading, self-correcting, and making meaning all of which occur in a natural context of reading (Hammond, 1997; Wason-Ellam, 1994). There was only one respondent out of the 102 respondents that chose to answer this question that reported miscue analyses as a tool they use to assess the reading of students with EBD. The Saskatchewan Curriculum outlines specific assessment tools that classroom teachers should be implementing (i.e., miscue analysis, running records, checklists, anecdotal records, and self-assessment, Saskatchewan Learning, 2002). It is alarming that these terms were not evident in respondents' answers. This suggests that teachers are not referring to curriculum resources or using research-based assessment practices to support their classroom assessment and/or instructional practices. If teachers are not aware of the major components of reading and are not using effective assessment tools, then the quality of reading assessment and instruction they are employing in their classrooms could be

negatively impacted. Once again, this suggests the urgent need for training in this area.

5.3 Limitations

The first limitation of the study relates to the sample used in the study. The majority of respondents were recruited from one urban school division in Western Canada. Teachers working in the same school division would likely follow reading assessment and intervention practices that have been laid out by their school division (i.e., types of assessment tools used). Teachers in this study may have responded to survey items according to practices being implemented at their school rather than their own personal beliefs regarding assessment. Therefore, results from this study can be defensibly generalized to teachers working in this school division or divisions of similar size promoting similar assessment and intervention practices relating to reading and students with EBD. Future studies wishing to expand the generalizability of their results should sample a diverse population across school divisions (i.e., in Western Canada or provinces across Canada).

Time constraints for schools and respondents were another possible limitation of this study. A number of time related issues could have decreased participation in this study. For example, surveys were distributed near the end of the school year (e.g., May and June). Teachers may not have had the time to participate since this is always a busy and stressful time (i.e., getting report cards completed, wrapping up instruction). In addition, the majority of the surveys were delivered in person, and collected upon completion of the surveys. Teachers may have felt rushed, pressured, or tired when completing the surveys, and not answered questions accurately or to the best of their ability.

A third possible limitation of this study relates to the incentive used to recruit subjects. Although the sample size in this study was sufficient (n= 175) to provide useful

information regarding educators' perceptions relating to reading assessment and intervention for students with EBD, participation rates may have been increased if incentives had been directed to the school level rather than the teacher level. In order to increase participation, three draws were included as an incentive. The majority of participants exercised this option and gift certificates from McNally Robinson Book Store were given out to three randomly selected participants. However, an incentive to the school may have been more beneficial, as principals were the ones who determined if their staff would or would not participate.

A fourth possible limitation to the study was the post hoc analysis used when ANOVA's revealed a statistically significant difference. Scheffé post hoc analyses did not reveal where differences were between groups for many of the questions. This is likely because Scheffe is the most conservative of post hoc analyses of simple comparisons. For future studies, using a less conservative approach (e.g., Bonferonni) may provide more insight as to where the differences in groups lie.

A fifth possible limitation to the study was the lack of reliability and validity evidence for the survey instrument that was used. Although the original survey was modified to suit the purposes of this study, no reliability or validity evidence was reported to have been collected with the original survey.

5.4 Conclusion

The current research explored teachers' perceptions of reading assessment for students with emotional and behavioural disorders (EBD). Initially this study set out to compare pre-service and in-service teachers' perceptions relating to reading assessment for students with EBD since little to no research has been completed in this area. However, due to the small number of pre-service teachers opting to participate in the

study (N=6) a comparison of this nature could not be made. Teachers' responses were instead considered in relation to other teacher characteristics (i.e., primary role in the school, years of experience).

It is well documented throughout the literature that students with EBD experience deficits in reading (e.g., Anderson et al., 2001; Coleman & Bos, 2002; Vaughn et al., 2002). Teachers must have a multitude of skills, knowledge, and strategies in the areas of reading assessment and intervention to meet the demanding needs of these students. This must be evident in both reading assessment and reading intervention. By implementing best practice, which incorporates appropriate reading assessments, and explicit and systematic instruction and intervention, teachers can begin to positively impact the outcomes for these students. Teachers' perceptions and knowledge are critical factors that impact student achievement.

Results from this study suggested teachers are lacking confidence and knowledge in the areas of reading assessment and instruction, as a result of poor training. There seems to be a disparity between what educators know and implement regarding reading instruction and what the research suggests as effective reading interventions for struggling readers (Bos, et al., 2001). In order to provide effective reading instruction and assessment, teachers must understand the components and fundamentals of reading (Farr & Trumbell, 1997). The findings in this study suggest they do not. Teachers of students with EBD require better pre-service and in-service training in order to provide high-quality instruction to better meet their academic needs (Sutherland et al., 2005). The results of this research contribute to the existing literature that supports the need for better-trained teachers in the area of reading assessment and intervention.

5.5 Implications For Practice

The vast majority of students with emotional and behavioural disorders (EBD) are identified as struggling readers (Anderson et al., 2001; Coleman & Bos, 2002; Vaughn et al., 2002). Yet, few research studies address this issue. Further training, such as enhanced professional development specific to reading assessment and intervention for special populations, needs to be supported. It is imperative there is training related to administering and interpreting reading assessments. The interpretation of reading assessments is often quite cumbersome and may be inconsistent from teacher to teacher (Hallahan & Kauffman, 2003). Therefore, further training in this area may allow for more consistency and understanding of various reading assessment results. Furthermore, once the assessment is carried out, teachers need to receive training related to what they can do with this information. Administering assessment after assessment provides no valuable information if you do not know what to do with that information. The value of assessment comes from educators possessing a deep understanding of the reading process and using the information to inform instruction (Valencia & Buly, 2004). In addition, school districts should ensure that professional development training is aligned with curriculum practices. For example, miscue-analyses is an informal assessment tool outlined by Saskatchewan curriculum as an effective assessment tool teachers should be using in their classroom. Although the vast majority of respondents hailed from the province of Saskatchewan, only *one* respondent reported miscue-analyses as an assessment tool they use. This suggests the need for further professional development and training.

Another implication this study may have on district administration could be the hiring process used. Administrators and/or other individuals involved in the hiring process

should consider candidates who have been formally trained and possess the knowledge required to teach reading. If candidates have received extensive training in this area, they should have a broader understanding of what is required to teach reading to specialized populations, such as students with EBD. This is especially true for primary school teachers. Hiring trained reading teachers, who have a solid understanding of how to instruct struggling readers would increase the long term outcomes for students with EBD.

The results from this study suggest that teachers may not possess the underpinnings of reading development that is crucial in delivering effective reading instruction. Teachers failed to report high levels of competence in the area of reading interventions and assessment for typically achieving students and students with EBD. This is likely due to insufficient training in this area. University programs need to critically analyze their reading courses to ensure that teachers are equipped to meet the reading needs of students, especially those students who struggle in reading. Formal reading training at the pre-service should be mandatory for teachers wishing to teach at any level (e.g., primary or secondary).

5.6 Implications for Future Research

There is limited published research pertaining to reading assessment and students with EBD. Future researchers should look at gathering data from a broader range of environments. For example, looking at teachers' perceptions of reading assessment in alternative education settings *specifically* for students with EBD, may provide additional insight in this area. Researchers noted that often the curriculum in these settings is directed at improving social skills and behaviour management skills, rather than on academic content (e.g., Kauffman, 1997; Knitzer et al., 1990). It would be interesting to

explore the similarities and differences in respondents working with children with EBD in the regular classroom setting and those working in self-contained or alternate settings.

Analyses of variance (ANOVA's) were used to examine the mean responses of teachers' training, perceptions of competence, and past and present practices regarding reading assessment for students with EBD. Eta squared ($\eta 2$), an estimate of effect size often used with ANOVA designs, was then used to estimate the importance of the treatment relationship (i.e., the size of the effect) of the independent variable on the dependent variable (Ness Evans, 2008). A medium to large effect size was reported for each statistically significant difference. This suggests that the difference reported between groups was indeed practical and meaningful (Salkind, 2008), and warrants further probing in this area.

In addition, some data was derived based on respondents' memory or ability to recall (e.g., number of university courses). Future studies may wish to investigate training programs offered by University's or school districts, or choose to survey or interview program instructors or directors.

APPENDIX A:

A NATIONAL SURVEY OF THE TRAINING AND PRACTICE OF SCHOOL PSYCHOLOGISTS IN READING ASSESSMENT AND INTERVENTION

(ORIGINAL SURVEY)

A National Survey of the Training and Practice of School Psychologists in Reading Assessment and Intervention 2

I. General Information

Please answer the following questions.

1.) In which state do you practice?_____

2.) Are you (circle one)? (1) Female (2) Male

3.) What is your race/ethnicity (circle one)?
(1) Latino/Hispanic (2) African American

(3) Native American (4) Asian American

(5) White/Non-Hispanic (6) Other _____

4). What is your age? _____ years

5.) What is your highest educational attainment (circle one)?
(1) MA/MS/MEd (2) EdS (3) Doctorate

(4) Other _____

6.) What year did you receive your highest degree?_____

7.) Please indicate how many years you have worked in a school as a school psychologist (either full or part-time). Consider the current year a full year. _____ years

8.) How many years of paid experience do you have as a teacher? _____ years

9.) Please circle the descriptor that best characterizes your school district:
(1) urban (2) suburban (3) rural

10.) Please indicate the percent of time you work at each level of education.

Preschool _____%
Elementary _____%
Junior High/Middle School _____%
High School _____%
Other _____%

11.) Are you (circle one)?
(1) Full time (2) Part time (3) Contract Services

12.) What is the approximate school psychologist to student ratio in your district?
(1) 1:500 (2) 1:1000 (3) 1:1500 (4) 1:2000

(5) 1:2500 (6) 1: 3000 (7) 1:>3000

II. Training

13.) Indicate the number of required graduate courses that you took in your school psychology training program that were exclusively devoted to the following. Please count each course in only one category. Please write in the number.

(Note: If it is difficult to remember your exact coursework, it is okay to estimate. Please write an "E" next to the number if you estimated for items 13-16.)

Reading assessment/diagnosis: _____

Reading remediation/instruction: _____

Reading assessment & remediation:_____
(Combined)

14.) Indicate the number of elective graduate courses that you took in your school psychology training program that were exclusively devoted to the following. Please count each course in only one category. Please write in the number.

Reading assessment/diagnosis: _____

Reading remediation/instruction: _____

Reading assessment & remediation:_____
(Combined)

15.) Indicate the number of graduate courses that you took in your school psychology training program that were partially devoted to the following. Please count each course in only one category. Please write in the number.

Reading assessment/diagnosis: _____

Reading remediation/instruction: _____

Reading assessment & remediation:_____
(Combined)

16.) Of those courses that partially covered reading assessment, reading remediation, or both, what percentage of the instructional time, on average, would you estimate was dedicated to these topics? Please write in the average percentage here: _____%

17.) It would have been beneficial if my school psychology training program devoted more time to the diagnosis and treatment of reading problems.

Very Much Disagree			Very Much Agree
1	2	3	4

18.) Indicate the amount of time your school psychology training program devoted to the assessment and remediation of reading difficulties.

No Time			Considerable Time
1	2	3	4

III. Reading Assessment and Remediation

19.) How would you rate your expertise in diagnosing reading problems? (Higher ratings mean that you can identify the child's reading problems with greater specificity than categorizing them as comprehension or word recognition problems).

Low			High
1	2	3	4

20.) How would you rate your expertise in the remediation of reading problems?

Low			High
1	2	3	4

21. Is it important for you to learn more about reading assessment?

Unimportant			Very Important
1	2	3	4

22.) Is it important for you to learn more about reading remediation?

Unimportant			Very Important
1	2	3	4

23.) How frequently do you evaluate phonological/phonemic awareness skills when you evaluate students with reading problems?

Never or Rarely			Very Often
1	2	3	4

If you evaluate phonological/phonemic awareness, which measure(s) do you typically use?

{Note: For Items 23, 25, 26, 28, please list specific subtests if you use a comprehensive test of academic achievement (e.g., WIAT-2, WJ-3, etc.). Abbreviations are fine.}

_____

_____

_____

_____

24.) How would your rate your current ability to identify, interpret, and explain phonological processing deficits?

Low			High
1	2	3	4

25.) How frequently do you evaluate rapid automatized naming (RAN) when you evaluate students with reading problems?

Never or Rarely			Very Often
1	2	3	4

If you evaluate rapid automatized naming, which measure(s) do you typically use?

_____

_____

_____

_____

26.) How frequently do you evaluate reading fluency when you evaluate students with reading problems?

Never or Rarely			Very Often
1	2	3	4

If you evaluate reading fluency, which measure(s) or techniques do you typically use?

_____

_____

_____

_____

27.) When you evaluate reading comprehension, how many measures do you typically use (please circle one)?

One Two Three More than three

28.) Which measure(s) do you typically use when evaluating reading comprehension?

_____

_____

_____

_____

IV. Early Reading Intervention

29.) How would you rate your knowledge of early indicators of reading problems?

Low			High
1	2	3	4

30.) How would you rate your current ability to work within an early intervention reading program?

Low			High
1	2	3	4

31.) I would like to be more involved in early intervention for struggling readers.

Very Much Disagree			Very Much Agree
1	2	3	4

32.) I am involved in an early intervention (K-3) reading program at one or more of my schools.
_____ Yes _____ No _____ N/A (don't serve an elementary school)

If yes, please check any of the roles in which you've been involved in an early intervention reading program:

_____ Screening to determine need for student participation (Either administering screening measures or training others to do so)
_____ Intervention design
_____ Intervention consultation
_____ Progress monitoring
_____ Program evaluation
_____ Other _____

V. Reading Intervention/Consultation

33.) How would you rate your knowledge of scientific, research-based reading interventions for students with reading problems?

Low			High
1	2	3	4

34.) How frequently do you consult with teachers regarding the implementation of interventions for students with reading problems?

Never or Rarely			Very Often
1	2	3	4

35.) Is it important for you to increase your knowledge of scientific, research-based reading interventions for students with reading problems?

Unimportant			Very Important
1	2	3	4

36.) How would you rate your knowledge of curriculum-based measurement in reading?

Low			High
1	2	3	4

37.) How frequently do you use curriculum-based measurement to monitor progress in reading when consulting with teachers on reading interventions?

Never or Rarely			Very Often
1	2	3	4

38.) How important is it for you to increase your knowledge of curriculum-based measurement in reading?

Unimportant			Very Important
1	2	3	4

VI. Current Practice

39.) Estimate the percent of cases referred to you that involve:

_____% Serious reading problems (2 or more years below grade level & expectation)
_____% Moderate reading problems (1-2 years below grade level & expectation)
_____% No significant reading problems (reading at or near ability level)

40.) In the schools you serve, who typically conducts the reading achievement portion of evaluations for cases in which the assessment of reading skills is relevant (check one)?

_____ School Psychologist
_____ Regular Education Teacher
_____ Special Education Teacher/LD Specialist
_____ Psychometrician/Educational Diagnostician
_____ Other _____

What percentage of cases where reading assessment is involved do you conduct this portion of the evaluation?
_____%

41.) My evaluations of students suspected of having reading disabilities are oriented more toward determining eligibility than developing specific intervention strategies.

Very Much Disagree			Very Much Agree
1	2	3	4

42.) After students have been determined eligible for special education, it is the role of other individuals (e.g., reading specialist, LD teacher, etc.) to assess reading problems more specifically in order to inform potentially effective instructional strategies.

Very Much Disagree			Very Much Agree
1	2	3	4

APPENDIX B:

A SURVEY OF THE TRAINING AND PRACTICE IN

READING ASSESSMENT AND INTERVENTION FOR STUDENTS WITH

EMOTIONAL AND BEHAVIOURAL DISORDERS (EBD)

(ADAPTED SURVEY)

Survey of the Training and Practice in Reading Assessment and Intervention for students with Emotional and/or Behavioural Disorders (EBD)
(Adapted from Nelson and Machek, 2007)

This study will investigate pre-service and in-service teachers' levels of training, perceptions of competence, and past and present practices regarding reading assessment for students with EBD.

The survey should only require **5-10 minutes of your time.** Your participation in this study will provide insight on this subject matter, as well as possible future directions to pursue (e.g., professional development, university training programs) in regards to assessing the reading skills of students with EBD. If additional correspondence is necessary you may contact Renee Gilchrist, at ren336@sasktel.net, or my Supervisor, Dr. Laureen McIntyre, at (306) 966-5266, or the University of Saskatchewan Research and Ethics Board (306-966-2084). Please return your completed survey **in the attached envelope** to **the location your principal or professor has placed** the self-addressed, stamped **return** envelope **for the collection of all the surveys.**

Please note that your participation is entirely voluntary and anonymous; furthermore, you may choose to withdraw from this process at any time. **Participation in this survey implies consent to use the data, with the provision of anonymity, in presentations to professionals, parents, and educators.**

As a thank-you and incentive for completing this survey, you have the option of entering your name in a random draw for one of three $50 gift certificates to McNally Robinson Book Store.

Thank you for your participation!

A Survey of the Training and Practice in Reading Assessment and Intervention for Students with Emotional and Behavioural Disorders (EBD)

Definition: For the purpose of this survey, EBD will be defined as, "a disability characterized by behavioural or emotional responses in school programs so different from appropriate age, cultural, or ethnic norms that they adversely affect educational performance, including academic, social, vocational or personal skills" (Forness & Knitzer, 1992, p. 13).

I. General Information

Please answer the following questions:

1) Are you (circle one)? (1) Female (2) Male

2) What is your age? _____ years

3) What is your highest educational attainment (circle one)?
(1) Bachelor of Education (2) A Master's Degree (3) A Doctorate Degree (4) Other (i.e. diploma)

4) How many years of teaching experience do you possess? _____ years

5) What is your primary role in the school you work in? (Please check one)

Classroom teacher	____
Special education teacher	____
Administrator	____
Pre-service teacher	____
Other (please specify)	____

6) Please indicate the percent of time you have worked at each level of education throughout your teaching career.

Preschool	_____ %
Elementary (K-5)	_____ %
Junior High/Middle School (6-8)	_____ %
High School (9-12)	_____ %
Other: _____	_____ %

II. Training

7) Indicate the **approximate number** of undergraduate courses **(U),** graduate courses **(G),** or professional development sessions **(PD)** you have received that were devoted to the following.

	U	G	PD
Reading instruction:	_____	_____	_____
Reading assessment:	_____	_____	_____
Reading instruction for students with EBD:	_____	_____	_____
Reading assessment for students with EBD:	_____	_____	_____
Behaviour management skills/strategies for students with EBD:	_____	_____	_____

On a scale from 1 to 4, please circle the rating that best indicates your response:

8). Indicate the amount of time your educational training program devoted to:

1. Assessment and intervention of reading difficulties

No Time 1 2 3 4 Ample Time

2. Assessment and intervention of reading difficulties for students with EBD

No Time 1 2 3 4 Ample Time

3. Behaviour management strategies for students with EBD

No Time 1 2 3 4 Ample Time

---

9). It would have been beneficial if my educational training program devoted more time to the area of:

1. Reading assessment

Very Much Disagree 1 2 3 4 Very Much Agree

2. Reading assessment for students with EBD

Very Much Disagree 1 2 3 4 Very Much Agree

3. Behaviour management strategies for students with EBD

Very Much Disagree 1 2 3 4 Very Much Agree

On a scale from 1-4, please circle the rating that best indicates your response:

10). How would you rate the quality of training you received with respect to:

1. Reading assessment strategies

Very Poor 1 2 3 4 Very Useful

2. Reading assessment strategies for students with EBD:

Very Poor 1 2 3 4 Very Useful

3. Behaviour management strategies for students with EBD

Very Poor 1 2 3 4 Very Useful

---

11). Pertaining to the items in this survey, how accurately were you able to recall your educational training?

No Very Accurately 1 2 3 4 Very Accurately

III. Reading Assessment and Intervention

On a scale from 1 to 4, please circle the rating that best indicates your response:

12). How would you rate your expertise in interventions for:

1. Reading problems

Low			High
1	2	3	4

2. Reading problems for students with EBD

Low			High
1	2	3	4

---

13). In regards to teaching students with EBD, how confident do you feel in the area of:

1. Reading intervention?

Not at all Confident			Very Confident
1	2	3	4

2. Reading assessment?

Not at all Confident			Very Confident
1	2	3	4

3. Behaviour management strategies?

Not at all Confident			Very Confident
1	2	3	4

14). In regards to teaching students with EBD, how important is it for you to learn more about:

1. Reading intervention?

Unimportant			Important
1	2	3	4

2. Reading assessment?

Unimportant			Important
1	2	3	4

3. Behaviour management strategies?

Unimportant			Important
1	2	3	4

15). In regards to teaching students with EBD, how do you feel about the following statement, "*I am still trying to figure out how to teach them, I can't even think about assessing them.*"

Strongly Disagree			Strongly Agree
1	2	3	4

---

16). How frequently do you assess the reading skills (i.e., phonological/phonemic awareness, fluency, comprehension) of students with EBD?

Never			Very Often
1	2	3	4

---

17). What type of assessment tool do you typically use when assessing the reading skills of students with EBD? (Please select one)

_____ formal _____ informal _____ both

18). Please list the specific areas of reading that you typically assess for when evaluating the reading of students with EBD? (e.g., comprehension)

19). Please list the specific assessment tool(s) you use to assess the reading of students with EBD? (e.g., Woodcock Johnson, DRA, CBM) Abbreviations are fine.

_____

_____

_____

IV. Current Practice

20). Estimate the percentage of your students that involve:

_____ % Serious reading problems (2 or more years below grade level & expectation)

_____ % Moderate reading problems (1-2 years below grade level & expectation)

_____ % No significant reading problems (reading at or near ability level)

21). Estimate the percentage of your EBD students that involve:

_____% Serious reading problems (2 or more years below grade level & expectation)

_____ % Moderate reading problems (1-2 years below grade level & expectation)

_____ % No significant reading problems (reading at or near ability level)

22). In the schools you serve, who <u>typically</u> assesses the reading skills of students with EBD (check one)?

____ School Psychologist
____ Regular Education teacher
____ Special Education teacher/LD Specialist
____ Other _____

---

23). My evaluations of students suspected of having reading disabilities are oriented more toward determining eligibility than developing specific intervention strategies.

Very Much Disagree			Very Much Agree
1	2	3	4

24). After students have been determined eligible for special education, it is the role of the other individuals (e.g., reading specialist, special education teacher, etc.) to assess the reading problems more specifically in order to inform potentially effective instructional strategies.

Very Much Disagree			Very Much Agree
1	2	3	4

If you have any additional comments regarding these issues, please feel free to share additional insights on the back of this survey.

Thank you for your participation!

APPENDIX C:

BEHAVIOURAL ETHICS BOARD APPROVAL

OF RESEARCH PROTOCOL

APPLICATION FOR APPROVAL OF RESEARCH PROTOCOL

To

University of Saskatchewan

Advisory Committee on Ethics in Behavioural Science Research

1.) Name of Advisor and Related Department

Dr. Laureen McIntyre, S-LP(C), CCC-SLP

Department of Educational Psychology and Special Education

University of Saskatchewan

1a.) Graduate Student

Renee Gilchrist

Graduate Student

Department of Educational Psychology and Special Education

1b.) Phase I: Anticipated start date of research is April, 2008.

Phase II: Expected completion of study is April, 2009.

2.) Title of Study

Teachers' Perceptions of Reading Assessment for Students with Emotional and/or Behavioural Disorders

3.) Abstract

The purpose of this study is to investigate pre-service and in-service teachers' levels of training, perceptions of competence, and past and present practices regarding reading assessment for students with emotional and/or behavioural disorders (EBD). For the purpose of this study, EBD will be defined as, "a disability characterized by behavioural or emotional responses in school programs so different from appropriate age, cultural, or ethnic norms that they adversely affect educational performance, including academic, social, vocational or personal skills" (Forness & Knitzer, 1992, p. 13). Approximately 200 pre-service and in-service teachers will be asked to complete an adapted version of the survey entitled, *A National Survey of the Training and Practice of School Psychologists in Reading Assessment and Intervention* (Machek & Nelson, 2007; see Appendix B) in order to answer the following research questions:

1.) What are teachers' levels of training regarding reading assessment for students with emotional and behavioural disorders (EBD)?

2.) What are teachers' perceptions of competence regarding reading assessment for students with emotional and behavioural disorders (EBD)?

3.) What are teachers' past and present practices (e.g., formal or informal testing) regarding reading assessment for students with emotional and behavioural disorders (EBD)?

4.) Funding

Funding is not required for this research.

5.) Expertise

Not applicable

6.) Conflict of Interest

The researcher is an employee of one of the participating school divisions who may grant permission for this study to be conducted. To ensure this study is entirely voluntary, the survey (Appendix B), the letter of intent to the school division and professors requesting permission to survey pre-service and in-service teachers (Appendix D), the letter of instruction to the school principals and university professors (Appendix E), and the letter requesting participant consent (Appendix F), explicitly state that the decision to participate in this study is entirely up to participants, and that they may withdraw from this process at any time. An incentive to complete the survey will be presented to voluntary participants. Upon completion of the survey, participants will be given the option to enter their name in a random draw for one of three $50 gift certificates to McNally Robinson Book Store.

7.) Participants

The directors of the participating school divisions will receive a request for permission to conduct research pertaining to teachers' perceptions of reading assessment for students with emotional and behavioural disorders within their school division. Various university professors of undergraduate education students will be emailed the same request. Upon approval from school division officials, a request will then be made to individual principals within the division to invite in-service teachers to participate in the survey. In addition, a letter of instruction will be provided that will also include the purpose and intent of this study. Once principals and professors grant permission, the surveys and consent forms will be distributed to voluntary participants in person or by mail. Individuals will not be coerced to participate; this will remain an entirely voluntary act. The choice to participate will be stated explicitly and individuals may withdraw at any time during the process. All responses will remain anonymous and confidential. If participants require additional information, the researcher will provide an email address (ren336@sasktel.net) in addition to the telephone number of her supervisor, Dr. McIntyre (306-966-5266), and the telephone number of the University of Saskatchewan Research and Ethics Board (306-966-2084). All information will remain confidential and will not be revealed in the thesis or possible future use of the data.

8.) Informed Consent

The directors of the school divisions and the university professors will be contacted to request permission to approach undergraduate students and teachers to participate in this study (Appendix D). Once approval has been granted, the researcher will present the principals a letter of instruction for completing the survey (Appendix E). Upon approval, the survey (Appendix A) and a letter of participation consent (Appendix F) will be provided in person by myself, or a

representative, to administer to teachers and students. In addition, it will be outlined to the participant that they are free to withdraw at any time.

9.) Methods/Procedures

The survey, *A Survey of the Training and Practice in Reading Assessment and Intervention for Students with Emotional and Behavioural Disorders (EBD)* has been adapted from the original survey entitled, *A National Survey of the Training and Practice of School Psychologists in Reading Assessment and Intervention* (Machek & Nelson, 2007) and attached (see Appendix A). Adaptations that have been made included revised and omitted items to target teachers' perceptions of their training, practice, and competence relating to reading assessment rather than school psychologists. In addition, questions were revised to elicit information regarding teachers' perceptions of reading assessment as it relates to students with EBD.

The survey should take approximately ten minutes to complete. Completed surveys will be collected by the researcher or her representative or returned by mail. Self-addressed, stamped return envelopes will accompany the surveys being mailed, which will be returned to the residence of the graduate student. Optimally, the return period will occur within a two-week period once participants have completed the survey. In addition, the personal email address of the researcher (ren336@sasktel.net), the telephone number of her Supervisor, Dr. McIntyre (306-966-5266), the telephone number of the University of Saskatchewan Research and Ethics Board (306-966-2084), will be included on the letter of instruction should additional correspondence be requested. A follow-up telephone call, letter, or email will be sent out to principals to inquire about surveys that have not been returned after an approximate period of four weeks. The

researcher will contact university professors in person to inquire about surveys not returned by this time.

10.) Storage of Data

The data (i.e., hard copies of questionnaires and computer data files) will be locked, secured, and stored by Dr. McIntyre at the University of Saskatchewan for a minimum of five years as required by the University of Saskatchewan guidelines. The data will be destroyed at the end of the five-year period.

11.) Dissemination of Results

The results of the graduate student's study will be used for thesis requirements for a Master's Degree in the Department of Educational Psychology and Special Education at the University of Saskatchewan.

The information will be gathered, summarized, and shared with the students' advisor, Dr. McIntyre at the University of Saskatchewan. In addition, the collected data may be used in presentations to parents, educators, and professionals, or in research presentations and publications.

12.) Risk or Deception

There are no perceived risks or deceptions involved in this study. The participant will be made

aware of the purpose and intent of the study.

13.) Confidentiality

Participants will be informed that participation is voluntary and that all responses will be completely anonymous in respect to all and any potentially identifying information. Each survey will be accompanied with an addressed envelope for participants to seal their completed surveys. Respondents will then place this sealed envelope in an additional stamped return envelope provided to each school principal and professor to ensure confidentiality.

14.) Data/Transcript Release

This study will not require signatures or additional permission from participants.

15.) Debriefing and Feedback

An addendum will be included on the survey (see Appendix A) to inform participants that public access will be made available at the University of Saskatchewan Education Library upon completion of the study.

16.) <u>Required Signature</u>

(1) **Student Signature**

_____

Renee Gilchrist

Master's Student

Department of Educational Psychology and Special Education

University of Saskatchewan

(2) **Supervisor Signature**

_____

Dr. Laureen McIntyre, S-LP(C), CCC-SLP

Department of Educational Psychology and Special Education

University of Saskatchewan

(3) **Department Head Signature**

_____

David Mykota, Department Head

Department of Educational Psychology and Special Education

University of Saskatchewan

APPENDIX D:

LETTERS OF INTENT/CONSENT/INFORMATION

LETTER OF INTENT TO THE SCHOOL DIVISION

May 1, 2008

RE: Permission to Survey School Teachers

Attention: _____, Director of Education

My name is Renee Gilchrist and I am a classroom teacher in the Greater Saskatoon Catholic School Division. As part of the requirements for the completion of my master's degree at the University of Saskatchewan in the Department of Educational Psychology and Special Education, I am conducting a research project that will investigate pre-service and in-service teachers' perceptions of training, competence and practice in reading assessment for students with emotional and/or behavioural disorders (EBD). There is extensive literature indicating that students with EBD experience significant deficits in the area of reading, however, there is limited information on reading assessment for this population of individuals.

The focus of my research involves delivering a questionnaire to undergraduate students at a post-secondary institute, classroom teachers, and resource room teachers/learning assistance teachers to complete (please see attached survey). The dissemination of the results may benefit school divisions' policies and practices regarding students with EBD by indicating strengths, possible directions for improvement, and consideration for alternatives. In addition, the results of this study may be beneficial to post-secondary education programs regarding effective training practices for instructing students with EBD. Participation is both entirely voluntary and anonymous. Completion of the survey will only require about ten minutes. Participants are able to withdraw from completing the survey at any time. Information identifying the participant is of no significant value to this study, and thus any correspondence will remain confidential and anonymous. If participants require any assistance, information, clarification, or if they wish to withdraw from this study they will be able to contact myself, Renee Gilchrist, at ren336@sasktel.net, my Supervisor, Dr. Laureen McIntyre at (306) 966-5266, or the University of Saskatchewan Research and Ethics Board (306-966-2084).

All data received will be available upon completion of my thesis from the Education Library at the University of Saskatchewan on or before April, 2009. This project has been approved on ethical grounds on May 29, 2008 by the Behavioural Research Ethics Board of the University of Saskatchewan.

In appreciation for completing this questionnaire, participants will be given the option to enter their name in a random draw for one of three $50 gift certificates to McNally Robinson Book Store.

Thank you for your thoughtful consideration with this matter. I look forward to hearing from you.

Sincerely,

Renee Gilchrist, B.Ed.
Graduate Student
Department of Educational Psychology and Special Education
University of Saskatchewan

LETTER OF INTENT TO UNIVERSITY PROFESSORS

May 1, 2008

RE: Permission to Survey Undergraduate Students

Dear Professor _____:

My name is Renee Gilchrist and I am a graduate student in the Department of Educational Psychology and Special Education at the University of Saskatchewan. I am conducting a research project that will investigate pre-service and in-service teachers' perceptions of training, competence and practice in reading assessment for students with emotional and/or behavioural disorders (EBD). There is extensive literature indicating that students with EBD experience significant deficits in the area of reading, however, there is limited information on reading assessment for this population of individuals.

The focus of my research involves delivering a questionnaire to pre-service teachers, classroom teachers, and resource room teachers/learning assistance teachers to complete (please see attached survey). The dissemination of the results expressed by the participants will provide insight on this subject matter, as well as possible future directions to pursue in regards assessing the reading skills of students with EBD. I would be most grateful if you would grant me permission to distribute a copy of the questionnaire to your pre-service teachers. Participation is both entirely voluntary and anonymous. Completion of the survey will only require about ten minutes. Participants are able to withdraw from completing the survey at any time. Information identifying the participant is of no significant value to this study, and thus any correspondence will remain confidential and anonymous. If participants require any assistance, information, clarification, or if they wish to withdraw from this study they will be able to contact myself, Renee Gilchrist, at ren336@sasktel.net, my Supervisor, Dr. Laureen McIntyre at (306) 966-5266, or the University of Saskatchewan Research and Ethics Board (306-966-2084).

All data received will be available upon completion of my thesis from the Education Library at the University of Saskatchewan on or before April, 2009. This project has been approved on ethical grounds on May 29, 2008 by the Behavioural Research Ethics Board of the University of Saskatchewan.

In appreciation for completing this questionnaire, participants will be given the option to enter their name in a random draw for one of three $50 gift certificates to McNally Robinson Book Store.

The participation of your pre-service teachers would be greatly appreciated. Thank you for your thoughtful consideration with this matter. I look forward to hearing from you.

Sincerely,

Renee Gilchrist, B.Ed.
Graduate Student
Department of Educational Psychology and Special Education
University of Saskatchewan

LETTER OF INSTRUCTION TO PRINCIPALS

May 1, 2008

Dear Principal,

My name is Renee Gilchrist, and I am a graduate student in the Department of Educational Psychology and Special Education at the University of Saskatchewan. I have received permission from _____, Director of Education, to submit surveys to all of the schools in your division to assist my thesis. The title of my study is *Teachers' Perceptions of Reading Assessment for Students with Emotional and/or Behavioural Disorders (EBD).*

There is extensive literature indicating that students with EBD experience significant deficits in the area of reading, however, there is limited information on reading assessment for this population of individuals. I would be most grateful if you would please provide a copy of my survey to your classroom teachers, and resource room teachers. These individuals have been sought as the target group for they are the individuals that assess the reading skills of these students. Multiple copies have been included for your convenience. The questionnaire should require no more than **10 minutes** of your time to complete. Please note that participation is entirely voluntary and anonymity will be ensured; all correspondence will remain confidential. In addition, participants may withdraw from completing the survey at any time. The dissemination of the results may benefit school divisions' policies and practices of programs for students with EBD by indicating areas of strengths, possible directions for improvement, and consideration for alternatives.

For your convenience I have provided a self-addressed, stamped return envelope. **To enhance anonymity please inform your staff of a discrete location the return envelope will be placed for the collection of completed surveys.** If any participant requests additional correspondence I may be contacted at ren336@sasktel.net or my Supervisor, Dr. Laureen McIntyre, may be reached at 306-966-5266, or you may contact the University of Saskatchewan Research and Ethics Board at 306-966-2084. Any and all additional correspondence will remain confidential.

This project has been approved by the Behavioural Research Ethics Committee of the University of Saskatchewan on May 29, 2008.

Data regarding my study will be available for all interested individuals in the Education Library at the University of Saskatchewan upon completion of this thesis.

In appreciation for completing this questionnaire, participants will be given the option to enter their name in a random draw for one of three $50 gift certificates to McNally Robinson Book Store.

The participation of your staff is greatly appreciated and I thank you for your thoughtful assistance in this matter.

Sincerely,

Renee Gilchrist, B.Ed
Graduate Student
Department of Educational Psychology and Special Education
University of Saskatchewan

LETTER OF INSTRUCTION TO UNIVERSITY PROFESSORS

April 1, 2008

Dear Professor _____,

My name is Renee Gilchrist, and I am a graduate student in the Department of Educational Psychology and Special Education at the University of Saskatchewan. With your permission, it would be greatly appreciated if your undergraduate students would participate in my questionnaire to assist my thesis. The title of my study is *Teachers' Perceptions of Reading Assessment for Students with Emotional and/or Behavioural Disorders (EBD).* Specifically, I am investigating pre-service and in-service teachers' levels of training, perceptions of competence, and past and present practices regarding reading assessment for students with EBD.

There is extensive literature indicating that students with EBD experience significant deficits in the area of reading, however, there is limited information on reading assessment for this population of individuals. I would be most grateful if you would please provide a copy of my survey to your undergraduate students. Multiple copies have been included for your convenience. The questionnaire and consent form should require no more than **5-10 minutes** of time to complete. Please note that participation is entirely voluntary and anonymity will be ensured; all correspondence will remain confidential. In addition, participants may withdraw from completing the survey at any time. The dissemination of the results may benefit school divisions' policies and practices of programs for students with EBD by indicating areas of strengths, possible directions for improvement, and consideration for alternatives. In addition, the results of this study may be beneficial to post-secondary education programs regarding effective training practices for instructing students with EBD.

For your convenience I have provided a self-addressed, stamped return envelope. **To enhance anonymity please inform your students of a discrete location the return envelope will be placed for the collection of completed surveys.** If any participant requests additional correspondence I may be contacted at ren336@sasktel.net or my Supervisor, Dr. Laureen McIntyre, may be reached at 306-966-5266, or you may contact the University of Saskatchewan Research and Ethics Board at 306-966-2084. Any and all additional correspondence will remain confidential.

This project has been approved by the Behavioural Research Ethics Committee of the University of Saskatchewan on May 29, 2008.

Data regarding my study will be available for all interested individuals in the Education Library at the University of Saskatchewan upon completion of this thesis.

The participation of your students is greatly appreciated and I thank you for your thoughtful assistance in this matter.

Sincerely,

Renee Gilchrist, B.Ed
Graduate Student

Department of Educational Psychology and Special Education
University of Saskatchewan

Title of Study:
Teachers' Perceptions of Reading Assessment for Students with Emotional and Behavioural Disorders (EBD)

Researcher and Supervisor:
Renee Gilchrist, Master of Education candidate in the Department of Educational Psychology and Special Education at the University of Saskatchewan.
E-mail: ren336@sasktel.net
Home Telephone: 477-3590

Dr. Laureen McIntyre, Department of Educational Psychology and Special Education, University of Saskatchewan.
E-mail: laureen.mcintyre@usask.ca
Office Telephone: 966-5266

Purpose of the Study:
The purpose of this study is to investigate pre-service and in-service teachers' levels of training, perceptions of competence, and past and present practices (e.g., formal and informal tests) regarding reading assessment for students with EBD. You are invited to participate in this study. The dissemination of the results may benefit school divisions' policies and practices of programs for students with EBD by indicating areas of strengths, possible directions for improvement, and consideration for alternatives. In addition, the results of this study may be beneficial to post-secondary education programs regarding effective training practices for instructing students with EBD. There are no known risks in this research study. The data collected may be used in presentations to parents, educators, and professionals, or in research presentations and publications. Only aggregate data will be reported. Therefore, it will not be possible to identify any individual participants in any documents resulting from this research.

As a participant in this study:

1. You are asked to sign this consent form and complete the Teacher Survey that may take approximately 10 minutes to complete. All data will be kept confidential. Identifying information will be replaced with code numbers, therefore the researcher will only have access to anonymous information.
2. You have the right to refuse to answer individual questions.
3. You have the right to withdraw from this study at any time. If you choose to withdraw, the data you provided will be removed from analysis and destroyed.
4. Your data will be locked, secured, and stored by the researcher's supervisor, and safeguarded for at least five years.
5. By voluntarily participating in this study, you will be given the option to enter your name into a random draw for one of three $50 gift certificates to McNally Robinson Book Store.

If you have any questions concerning this study, please feel free to contact the researcher. This project has been approved by the Behavioural Research Ethics Committee of the University of Saskatchewan on May 29, 2008. Any questions regarding your rights as a participant may be addressed to that committee through the Office of Research Services (966-2084). The results of

this study will be available at the University of Saskatchewan Education Library upon completion of this thesis.

I have read and understood the description above. I have been provided with contact information to have any questions addressed. I consent to participate in the study described above, and understand that I can withdraw at any time.

Name of Participant (please print): _____

Signature: _____

Date: _____

Signature of Researcher: _____
Renee Gilchrist
Masters Candidate, University of Saskatchewan

In appreciation for your time and effort in completing this questionnaire, please feel free to put your name in a random draw for a chance to win one of three $50 gift certificates to McNally Robinson Book Store. Winners will be contacted by phone or e-mail upon completion of study.

Thank-you again for your participation!

Please detach on dotted line.

NAME: _____

ADDRESS: _____
_____
_____

PHONE NUMBER/E-MAIL: _____

APPENDIX E:

RESPONSES TO OPEN ENDED QUESTIONS (#18 & #19)

18. Please list the specific areas of reading that you typically assess for when evaluating the reading of students with EBD? (e.g., comprehension)

Subject #	Comment
1	comprehension, word attack, phonological, semantics, awareness
2	comprehension, memory, pronunciation
3	many
4	comprehension
5	
6	phonological/phonemic awareness
7	comprehension; lower level comprehension
8	accuracy, comprehension, phonetics
9	n/a
10	comprehension & retention, application
11	comprehension, fluency, sequencing, prediction, context clues
12	word attack, fluency, comprehension
13	
14	n/a
15	n/a
16	comprehension, fluency, inferencing
17	comprehension, predictions, assignments
18	predicting, summarizing, inference, reflecting, literal comprehension, metacognition
19	fluency, comprehension, miscue analysis, and recall
20	comprehension
21	comprehension, fluency, response previewing and predicting, oral reading, story retelling, sight word, DEAR (silent reading)
22	language and development, phonemic awareness, listening skills, sight words, vocabulary development, comprehension
23	comprehension, fluency, word attack
24	resource teacher
25	
26	I don't
27	
28	fluency, strategies, comprehension, phon. Awareness
29	comprehension, fluency
30	
31	
32	
33	have not evaluated students with EBD that I am aware of
34	most of my educational training is at the secondary level. Any education/training related to behaviour/special needs was done at the University level
35	comprehension, fluency, vocabulary
36	letter recognition, phonemic awareness, understanding, fluency

37	n/a
38	comprehension, pronunciation, fluency, comfort, word recognition
39	word attack, fluency, comprehension, self-correction
40	enjoyment, level, comprehension
41	comprehension, recognition
42	
43	
44	
45	fluency, word pronunciation (phonemic awareness), comprehension, recall (story), story retelling
46	comprehension, mechanics (in written response)
47	phonemic awareness, sight words, comprehension
48	L.A.T does this
49	comprehension
50	same as for "general population" – comprehension, decoding, accuracy and fluency
51	fluency, comprehension
52	
53	comprehension, fluency, pronunciation
54	comprehension, fluency, speed, pronunciation
55	level decode/comp.
56	comprehension, decoding
57	fluency, comprehension, prediction, prior knowledge, vocabulary
58	vocabulary, comprehension
59	phonological, comprehension, decoding/spelling
60	fluency, word attack skills, comprehension
61	4 blocks of literacy, word attack, comprehension
62	fluency, comprehension, reading grade level, inferring, sequencing
63	n/a
64	vocabulary, comprehension, attack skills
65	phonemic skills, comprehension
66	vocabulary, comprehension, linguistic awareness, letters and sounds, oral speed and accuracy, fluency, use of context clues, pseudoword decoding, oral expression, word fluency, decoding, target words (dolch)
67	comprehension, fluency
68	
69	comprehension fluency, phonological awareness
70	phonological awareness, fluency, comprehension
71	I would assess for comprehension, summarization, analysis, knowledge, memory
72	comprehension, fluency, decoding
73	comprehension, fluency, vocabulary
74	comprehension, social understand, pragmatic understanding/language
75	I don't specifically evaluate the reading of EBD students. As a class, I test comprehension and reading level

76	decoding skills
77	comprehension of literature and non-fiction text
78	fluency, phonemic, comprehension
79	comprehension
80	comprehension, pace, fluency, phonetic skills
81	comprehension
82	comprehension, pronunciation
83	phonological/phonemic awareness, fluency, order – left to right, sight word recognition
84	
85	all the areas as with everyone else – word attack, comprehension etc
86	
87	letter and sound recognition, sight words
88	comprehension, letter and sound recognition
89	
90	comprehension
91	fluency, comprehension, interest, flow
92	comprehension, retell, fluency, phonetics
93	
94	
95	reading strategies, comprehension, vocabulary, sounds, phonemic awareness
96	vocabulary, comprehension, phonemic awareness, reading strategies
97	decoding, fluency, comprehension, word recognition
98	comprehension, word attack(decoding), fluency, word recognition
99	decoding, word recognition, fluency, comprehension
100	comprehension, fluency, decoding
101	decoding, fluency, comprehension
102	comprehension, rate
103	word identification, comprehension, fluency
104	
105	comprehension
106	
107	phonemic awareness, comprehension, fluency, prediction
108	
109	comprehension, phonological and phonemic awarenss, fluency
110	comprehension (e.g., inference, making connections, etc), word recognition, fluency, decoding, miscues, phonological awareness, phonemic awareness
111	comprehension and fluency
112	
113	word attack, fluency, comprehension, vocabulary, story elements
114	fluency, comprehension, accuracy
115	
116	accuracy, comprehension, fluency

117	decoding, fluency, sound/symbol associations, word recall, vocabulary, comprehension
118	running records, Alberta Diagnostic
119	guided reading level, comprehension, phonemic awareness – where age appropriate
120	fluency, comprehension
121	all areas
122	n/a
123	comprehension, fluency, sight word knowledge
124	word identification, word attack, comprehension, fluency
125	comprehension, word attack
126	all areas (ongoing) through guided reading
127	focus, word attack skills, comprehension, fluency
128	sequencing, comprehension
129	
130	vocabulary, comprehension
131	
132	
133	comprehension, context, critical thinking
134	fluency, comprehension
135	reading level, sight vocab., comprehension, phonological awareness
136	
137	
138	fluency, comprehension, retelling skills
139	fluency, comprehension, pronunciation
140	
141	fluency, comprehension, sight vocabulary
142	comprehension, fluency, word attack
143	
144	comprehension, analysis, word recognition
145	comprehension
146	haven't done much of this with this population of students – fluency, accuracy, comprehension
147	n/a
148	
149	decoding, fluency, comprehension
150	comprehension, accuracy, fluency
151	comprehension, reading strategies, text to text connections
152	comprehension, visualizing, connecting to personal experience
153	comprehension, retelling, reading level
154	phonemic awareness, letter sounds, letter identification
155	comprehension, fluency
156	word identification, attack, word and passage comprehension
157	fluency, comprehension
158	

159	letter/sound relationships, sight words
160	fluency, comprehension, word attack
161	running records, comprehension
162	reading for meaning, sounds-french instruction, context
163	comprehension, prediction
164	comprehension, recall, word recognition
165	n/a
166	comprehension, predicting, analyzing
167	n/a
168	word attack skills, sight word, comprehension
169	comprehension, word attack, tracking
170	comprehension
171	comprehension, retelling
172	
173	word attack, comprehension, vocab, word knowledge, math
174	comprehension, vocab, prior knowledge, subject specific
175	

19. Please list the specific assessment tool(s) you use to assess the reading of students with EBD? (e.g., Woodcock Johnson, DRA, CBM) Abbreviations are fine.

Subject #	Comment
1	Woodcock, DRA, running records, benchmark, teacher-made, word attack and comprehension questions, academy of reading, rubrics (for pre-reading)
2	DRA, CBM
3	WJ, DRA,CBM
4	
5	none
6	DRA
7	
8	Woodcock, DRA, benchmark
9	LAT assesses
10	guided reading
11	DRA, Alberta Diagnostic
12	informal tools
13	
14	n/a
15	
16	DRA
17	DRA, CTBS
18	DRA
19	WJ11, DRA, Psycan Reading level indicator
20	DRA
21	DRA, some receive WJ, miscue analysis, --ald multisensory technique
22	Woodcock Johnson, Brigance, WRAP-Nelson
23	DRA
24	resource teacher
25	DRA, Lat teacher, resource room teacher, school system psychologist
26	
27	
28	DRA, curriculum
29	Woodcock, DRA, Alberta Diagnostic
30	
31	
32	
33	DRA if I have worked with those types of students
34	
35	DRA, Alberta diagnostic
36	Woodcock Johnson
37	n/a
38	Woodcock Johnson, Guided Reading
39	Woodcock, DRA

40	informal reading inventory, requests for more formal testing through LAT
41	
42	
43	
44	
45	WJIII Achievement regarding reading and its components, Brigance (reading components), DRA
46	usually the LAT does this
47	DRA, phonemic checklists
48	LAT does this
49	Alberta Diagnostic
50	DRA, Woodcock Reading Mastery Test, Dawn Reithaug (phonemic/sight words), teaching students with Reading Difficulties (Sask Learning)
51	will be using DRA next year, nothing used in past for middle years
52	
53	these are done by LAT
54	LAT does this – not me
55	WISC, DRA, BASC
56	Alberta Diagnostic, Woodcock
57	LAT – formal, class- informal
58	DRA, Woodcock
59	DRA
60	DRA
61	WRMT, DRA, Alberta Diagnostic, Reithaug
62	Gray Oral Reading Test, DRA
63	n/a
64	n/a
65	none
66	Woodcock Johnson, 6 –fes-MacGinities, guided reading, WRAT-II
67	n/a
68	
69	Woodcock Johnson, QRI
70	WJIII, DRA, Scholastic 3 minute assessment, QRI 4
71	
72	WJ
73	n/a
74	
75	Only our resource teachers use the Woodcock, etc, I use Morris & McCall for spelling level and a variety of teacher made comp. tools
76	phonological awareness test
77	RAD, BC performance standards rubric on literature
78	ARD, running records
79	ARD, running records, anecdotals

80	ARD, Tilef – French immersion
81	
82	
83	observation
84	
85	DRA, Woodcock, informal assess.
86	
87	DRA
88	DRA
89	DRA, Woodcock
90	
91	Our LATS use the following assessment tools
92	DRA
93	
94	DRA, Woodcock
95	LAT do this in our school
96	LAT does this
97	DRA, Woodcock, Dawn Reithaug Assess
98	DRA, Woodcock, Dawn Reithaug Assess
99	DRA, Woodcock, Dawn Reithaug Assess
100	DRA, Woodcock
101	DRA, Woodcock
102	n/a
103	WRMT-R, DRA (Gr K-3) and (Gr 4-8), CAT-3
104	
105	
106	
107	DRA, WISC-R
108	
109	Woodcock Johnson, DRA, WRAT, informal reading inventories
110	Woodcock Johnson, DRA, WRAT, HIP assessment, running records, BASC, WYATT
111	DRA
112	
113	DRA, Alberta Diagnostic, Benchmarks, Woodcock Reading Assessment
114	DRA, Alberta Diagnostic Benchmarks Kit (new to system)
115	
116	DRA, wordlists, Alphabet recognition
117	Academy of Reading, Alberta Diagnostic
118	DRA
119	DRA, Woodcock, Academy of Reading
120	resource teacher does this
121	DRA, Alberta Diagnostic, W.R.M.T
122	n/a

123	DRA, Woodcock Johnson, Alberta Diagnostic
124	DRA, benchmark, IRA, Woodcock, Alberta Diagnostic, CAT 4, CTCS
125	Woodcock, DRA
126	DRA, Woodcock, Benchmark
127	DRA, Woodcock, Benchmark
128	
129	
130	done by LAT
131	
132	
133	Woodcock, Alberta Diagnostic
134	Woodcock, DRA
135	DRA (myself, LAT would do more)
136	
137	Woodcock
138	DRA, running records
139	n/a
140	
141	DRA, informal reading inventory, running records
142	
143	Woodcock
144	Woodcock, Edmonton Diagnostic, DRA
145	
146	Woodcock Johnson, DRA
147	at school level – running records, W-J, DRA, Alberta Diagnostic
148	
149	Woodcock Johnson, DRA, Benchmark, anecdotal records, CTCS
150	running records, DRA
151	reading continuams
152	DRA, Woodcock
153	DRA
154	Woodcock
155	DRA, Woodcock
156	DRA, Woodcock, Benchmark, CAT IV, CTCS
157	Alberta Diagnostic, Benchmarks
158	
159	n/a
160	running records, personal assessment (exams I have made up)
161	DRA, running records
162	
163	DRA, Woodcock
164	
165	n/a
166	DRA, Woodcock
167	n/a

168	DRA, Woodcock, Burns & Roe
169	Woodcock – LAT generally do this formal assessment for me
170	done by resource teacher
171	DRA, Woodcock
172	
173	Woodcock Johnson, Fontus & Pinnell, Alberta Diagnostic, Key Math
174	Gates
175	

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